McGRAW-HILL ACCOUNTING SERIES
F. H. ELWELL, CONSULTING EDITOR

ELEMENTS OF ACCOUNTING

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ELEMENTS OF ACCOUNTING

BY

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First Edition
Third Impression

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ELEMENTS OF ACCOUNTING

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To

E. B. C.

PREFACE

This book is designed for a short course in accounting at college level. Emphasis has been placed on the uses and interpretation of accounting data, but attention has also been given to the procedures whereby these data are entered on the records. A general understanding of the methods of recording accounting values—but not a proficiency in the mechanics of accounting—is an essential background for the analysis of statements. A failure to understand the sources of these values often results in distorted impressions of their significance.

The text, problems, and questions have been correlated to stress fundamental ideas in accounting. These ideas, if thoroughly understood, will assist the student to reason accurately with the economic facts of a business.

An attempt has been made to treat the subject matter so that it will possess greater flexibility than does a more complete text not designed for the time limitations imposed by a short course. If necessary, certain chapters (after Chap. VI) may be omitted without seriously disturbing the continuity of the course. For example, if instruction is being given to a group interested in accounting because of its importance to investment analysis, it might be desirable to stress the text and problem material in Chaps. XIV and XV and to omit Chaps. VII, XII, and XIII.

It is impossible to make specific acknowledgments of indebtedness to the numerous authors of textbooks and articles which have influenced the preparation of this book. I am especially indebted to Prof. W. A. Paton for his encouragement in the past and for the influence of his writings.

RAYMOND W. COLEMAN.

PITTSBURGH, PA.,
January, 1941.

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ELEMENTS OF ACCOUNTING

CHAPTER I

INTRODUCTION

Evolution of Accounting.—Accounting is concerned with recording and analyzing the transactions of a business. Its development has been a process of evolution—a growth in response to the demands of an increasingly complex economic organization. Records, in some form, however crude, became necessary shortly after man had progressed to a stage of civilization where he exchanged his goods and services for those of others.[1] Not until 1494, however, when Luca Pacioli published his treatise, was there a book which offered a technique for keeping accounts.[2]

Historically, Pacioli's treatise marks an important step in the keeping of records by double-entry bookkeeping. Another important step occurred in the latter part of the nineteenth century, when bookkeeping was expanded into what is now

[1] There is ample evidence of early bookkeeping records: in Babylon clay tablets, as early as 2600 B.C., and later papyrus records disclosed commercial transactions; in Rome the elaborate system of taxation and the governmental budgetary system necessitated records, and the "Adversaria," a book frequently kept by the head of the household, recorded the household receipts and expenditures; in Great Britain the English Pipe Roll of 1130 was compiled by the Treasurer and entered on the Exchequer, and showed debts due the Crown; as early as 1340 accounts of the Steward of the Local Authority of Genoa were kept by a system of double entry; in both Venice and Florence double-entry bookkeeping was used in the early part of the fifteenth century.

[2] Pacioli's text, "Suma de arithmetica geometria proportioni et proportionalita" ("Everything about Arithmetic, Geometry, and Proportion"), contained also the first printed treatise on algebra. The bookkeeping section of the text is entitled "De computes et scripturis." Pacioli was a mathematician of recognized standing. Sometime after the publication of his text Da Vinci collaborated with him in "The Divine Proportione," Pacioli writing the text and Da Vinci furnishing the illustrations.

known as accounting. This change followed closely the rise in importance of the corporate form of organization after the Civil War. Larger capital investments with more complex business structures necessitated the development of better methods of keeping and analyzing business records.

More recently the reports prescribed by various governmental agencies in this country have had a marked effect on the growth of accounting. The Federal income-tax law, for example, has meant much to the development of systematic accounting. Many enterprises, which prior to its enactment possessed inadequate records, were forced to keep records sufficiently adequate for the computation of the tax. It is not to be inferred from this, however, that the accounting principles advocated by the Bureau of Internal Revenue are necessarily the most desirable for use by the enterprises submitting reports. In many cases these regulations have not, in the opinion of management, been suitable for the requirements of enterprises.

The regulations of the Interstate Commerce Commission have exerted a marked effect upon railway accounting; the reports to the Comptroller of the Currency prescribe information which must be furnished by reporting banks; and the regulations of the Securities Exchange Commission prescribe the data which must be submitted to the commission for approval before corporate securities can be sold. While most of these measures were designed to regulate or control certain aspects of economic activity, they have invariably influenced the development of accounting.

At the present time the uses to which accounting may be applied are numerous. It may be employed not only by business enterprises but by nonprofit organizations (lodges, churches, etc.) for the direction of their activities; by national, state, or other governmental units to record the receipt and expenditure of funds; and, in fact, by any individual or group for the protection of its interests or the administration of its affairs.

The predominant use of accounting, however, is to control the finances and operations of an enterprise. Therefore, unless otherwise noted, the subject will be considered from the point of view of the owner or the management of a business.

Branches of Accounting.—Some conception of the degree to which the evolution of accounting has progressed in profit enter-

prises may be acquired by examining its principal branches. For immediate purposes the term "accounting" will be provisionally defined as the technique of controlling and interpreting business records.

The first division, in order of logical sequence, is *system installation.* This special branch is concerned with the most desirable plan for keeping the records of a business. The nature of the individual enterprise is studied; then that plan of keeping records which best suits the peculiar requirements of the enterprise is devised. It follows, therefore, that the degree to which accounting systems may be standardized is strictly limited. The accounting requirements ideal for one business may be inadequate for another and cumbersome for still another. It is as unreasonable to expect a standardized accounting system to meet the needs of all businesses as it is to argue for identical capital or machinery requirements for all enterprises. The best accounting system is that which gives the most desirable information with the least amount of effort and expense. To approach this ideal as closely as possible, the accountant usually checks and, if necessary, revises the system after it has been in operation.

Bookkeeping, another important division of accounting, is concerned for the most part with the clerical aspects of analyzing and recording business transactions. The relation between bookkeeping and accounting is solely a question of inclusiveness; accounting comprises bookkeeping as well as other divisions of the subject.

A third phase consists of the *preparation of accounting statements.* This includes taking the results of bookkeeping, revising the values of properties and other things owned by the business, and, after all necessary adjustments have been made, presenting significant facts of the enterprise in statement form.

A fourth division is the *analysis and interpretation of accounting statements* for the purpose of indicating how changes may be made in order to strengthen finances and improve earnings.

A fifth field, *cost accounting,* may be defined as the analytical study of the costs of a business. Cost accounting has developed in response to a growing complexity of manufactured products, and the necessity of knowing costs not only of products but of the various processes in manufacturing and marketing commodities and in rendering services.

Quite properly *auditing* is the division to be considered last.[1] It deals with the verification of accounting records. Usually the purpose of an audit is twofold: to determine the true financial condition and the earnings of a business, and to detect errors or fraud.

A Definition of Accounting.—From this brief survey of the branches of accounting the following features should be noted:

1. A plan wherein records relating to the business are kept
2. The analysis and recording of all business transactions relating to the enterprise
3. The preparation and analysis of statements drawn from the records
4. The verification and criticism of the records and statements

These points may be incorporated into a somewhat more comprehensive definition than the provisional one given earlier in the chapter (page 3). From the point of view of management, *accounting* may be defined as a method of classifying, recording, summarizing, and interpreting those values of an enterprise which are measurable in monetary units.

Accounting and Related Subjects.—A still clearer conception of the nature of accounting may be gained by briefly discussing its relation to allied fields.

Foremost among related subjects is economics. Economics has been commonly defined as the social science of wealth. The term "wealth" refers to those things appropriated by man to serve his needs, goods that are scarce and that satisfy some want. Since these commodities are limited in quantity and since there are almost universal cravings for them in some form, the individual's conduct is largely shaped by a desire to obtain them. Fortunately, there is no uniformity of desire for an unlimited stock of one type of wealth. Those having an excess of one kind exchange it for a more desired form. Before this exchange can be made, however, some measurement of the relative worth or

[1] Other divisions of accounting, not an integral part of the records of profit enterprises, include governmental accounting, which is concerned with the records of national, state, municipal, or other governmental units; income-tax accounting, which relates to the preparation of tax returns for the Bureau of Internal Revenue or state authorities; and budgets, which pertain to predetermined plans of operation which serve as standards of comparison with actual operating results.

desirability must be placed on the commodities to be transferred. Price is the monetary expression of value placed on these articles of wealth. Accounting records, in monetary measurement, all the wealth (and in addition certain rights and privileges not classifiable as economic wealth) of the business enterprise. Accounting in its relation to economics fulfills a very specific function. It records and presents the values of an enterprise in such a way that the entrepreneur can most prudently direct the wealth under his control into the most productive channels.

The point of view of the economist differs from that of the accountant. The economist's point of view is a social one. He is interested in the particular enterprise only as it influences the economic structure. Business occurrences of an enterprise are of no special consequence except as they relate to wealth and hence acquire social significance. In contrast, the accountant ordinarily takes the point of view of the management, or of the owners, which considers the business transaction in relation to its effect upon the individual enterprise.

This difference in points of view necessitates caution in the application of economic terms to the field of accounting. A consideration of the term "profit" will illustrate this point. To the economist, profit refers to the return accorded the entrepreneur for the peculiar function which he performs and which cannot be delegated to land, labor, or capital. Essentially it is a return resulting from the assumption of final responsibility for bringing together the factors or agents of production. The accountant uses the term as it applies to the owner of the business; it refers to the increase in proprietorship resulting from operations over a period of time. Profit to the accountant is the excess of the revenue received during a specified period of time over the costs incurred in obtaining that revenue. This difference may contain wages to the proprietor, interest on his invested capital, or rent on land held by the company. The accountant's profit may contain what the economist would consider a mixture of rent, interest, wages, and true economic profit; or it may contain only the economic concept of rent, interest, or wages, with economic profit entirely lacking.

Like economics the relation of law to accounting is in many cases a close one. The law of contract, of principal and agent, of sales, of negotiable instruments, of real and personal property, of

partnerships, of corporations, and of bankruptcy greatly influences, and in not a few cases governs, the accounting procedure to be followed. In fact some legal consideration is involved whenever a business transaction involving a relationship between the enterprise and an outside entity occurs.

Again accounting procedure is often closely related to engineering practice. The valuation of business property, the selection of the most efficient mechanical equipment for the control of materials, the determination of standards of performance through time and motion studies, and the establishment of wage-payment plans are illustrations of problems, part engineering and part accounting.

The relation of accounting to management is somewhat different from the fields discussed so far. Modern management is dependent upon the aid furnished by accounting. The phrase "accounting is a tool of management" is omitted from few textbooks discussing this relationship. Accounting renders a service by placing in the hands of management analyzed business data relating to the financial structure of the enterprise. With this information, wise decisions and intelligent policies are possible; without it, decisions and policies are made in the absence of facts. It should be noted, however, that all problems of management cannot receive aid from accounting. Only those data with which accounting is concerned, economic values of an enterprise that can be quantitatively measured in dollars and cents, provide significant assistance in the formulation of management policies. Only to a limited degree can management look to accounting for aid in the difficulties of plant layout; of personnel relationships; of advertising procedure and similar problems.

Questions

Review.

1. When and by whom was the first published treatise on double-entry bookkeeping written?
2. Why does accounting closely follow the development of business enterprises?
3. How do you explain the fact that accounting for business has developed faster than accounting for other purposes?
4. Enumerate and discuss briefly six different fields or branches of accounting.
5. Define accounting from the standpoint of management.

6. Explain the relation of accounting to economics; law; engineering; management.
7. Contrast the point of view of the accountant and of the economist.

Discussion.

8. Of what benefit would the study of accounting be to a lawyer? A businessman? An investor? A banker?
9. How may accounting assist the businessman to control his enterprise in respect to the business cycle?
10. Taken from an advertisement of an accounting system: "Our system permits the user to draw from the records all the essential data necessary for the preparation of the federal income tax report and to prepare a balance sheet and profit and loss statement of his business." Is there any limit to the flexibility of a single ready-made accounting system? Explain.
11. Discuss the relative merits of studying accounting from the point of view of learning thoroughly a particular system, as against learning the underlying principles of accounting applicable to a variety of enterprises.
12. Give reasons why the following should or should not possess an accounting system:

    a. A hospital
    b. A university
    c. A city government
    d. A fraternity
    e. A very small business
    f. A very large business

13. How do you account for the frequent conflict of viewpoints of accountants and economists? Of accountants and engineers?
14. What is the relation between the presence of a good accounting system and management? To what extent can it aid management, and wherein is it of limited use?
15. Discuss the role of accounting in a plan of economic control.

Suggested Supplementary Readings

On the history of accounting:

LITTLETON, A. C.: "Accounting Evolution to 1900," American Institute Publishing Company, New York, 1933.

PERAGALLO, EDWARD: "Origin and Evolution of Double Entry Bookkeeping," American Institute Publishing Company, New York, 1936.

On the general nature of accounting:

GREER, H. C.: "How to Understand Accounting," Chap. 1, The Ronald Press Company, New York, 1928.

KOHLER, E. C., and P. L. MORRISON: "Principles of Accounting," Chap. 1, McGraw-Hill Book Company, Inc., New York, 1931.

PATON, W. A.: "Essentials of Accounting," Chap. 1, The Macmillan Company, New York, 1938.

ROREM, C. R.: "Accounting Method," Chaps. 1 and 2, University of Chicago Press, Chicago, 1930.

CHAPTER II

BASIC STATEMENTS

While the historical approach describes the growth and importance of accounting in business, it does not offer an explanation of the subject itself. To explain better several fundamental principles and to offer a background for the study of the accounting cycle considered in later chapters, the present chapter and the succeeding one will survey the most important statements and books.

The Accounting Equation.—Important among the principles in accounting is the concept that someone—either the owner or someone else—has a claim to all property rights or other things of value to the enterprise. The technical name given to the things of value owned by the business is *assets;* the technical name given to rights to assets is *equities.* Expressed algebraically the basic equation in accounting is as follows:

$$\text{Assets} = \text{Equities}$$

Even though the business may have legal title to all the assets, some obligations to others are usually outstanding. Thus equities are of two types: the rights of outsiders to the assets of the business, and the rights of the owners. Equities of outsiders are called *liabilities;* equities of the owners, *proprietorship.* The customary form in which the basic equation is expressed includes both types as follows:

$$\text{Assets} = \text{Liabilities} + \text{Proprietorship}$$

The Balance Sheet as an Expression of the Basic Equation.—The *balance sheet*[1] is a direct expression of this basic equation.

[1] The "Accountants' Handbook" lists the following other statement titles sometimes used instead of the term "balance sheet": "general balance sheet; financial statement; statement of resources and liabilities; statement of assets and liabilities; statement of assets; liabilities and capital; statement of financial condition; statement of worth." Paton, W. A., ed., "Accountants' Handbook," p. 5, The Ronald Press Company, New York, 1933.

It may be defined as the accounting statement which shows, at a given date, the financial structure of the enterprise by exhibiting the assets, liabilities, and net worth or proprietorship.

Assume, for example, that the assets and equities of John Ade were as follows:

Cash	$ 750
Accounts receivable	1,000
Merchandise inventory	3,000
Land	2,000
Buildings	5,000
Delivery equipment	500
Accounts payable	450
Notes payable	300
John Ade, proprietorship	11,500

These data expressed in the form of the basic equation would be

Cash, $750 + accounts receivable, $1,000 + merchandise inventory, $3,000 + land, $2,000 + buildings, $5,000 + delivery equipment, $500 = accounts payable, $450 + notes payable, $300 + John Ade, proprietorship, $11,500

This cumbersome arrangement may be overcome by exhibiting the same data in balance sheet form.

JOHN ADE

BALANCE SHEET, DECEMBER 31, 19__

Assets			Liabilities		
Current:			Current:		
Cash	$ 750		Accounts payable	$450	
Accounts receivable	1,000		Notes payable	300	
Merchandise inventory	3,000		Total current liabilities		$ 750
Total current assets		$ 4,750			
			Proprietorship		
Fixed:					
Land	$2,000		John Ade, capital		11,500
Buildings	5,000				
Delivery equipment	500				
Total fixed assets		7,500			
Total assets		$12,250	Total equities		$12,250

Principal Asset Groupings.—The statement given on page 9, exhibiting the financial structure of a comparatively simple business, may be contrasted with the more complex balance sheet on pages 12 and 13, which also better serves as a reference for a discussion of the principal sections within the statement.

On the asset side of the usual balance sheet the principal groupings are current assets, investments, sinking funds, deferred charges, fixed assets, and intangible assets.

Current assets are those which will be converted into cash in the normal course of business within a comparatively short time, usually within a year. Customary titles listed under current assets are cash, accounts receivable, notes receivable, merchandise inventory, and other current assets.

1. *Cash* includes currency on hand, bank drafts or deposits available for use, money orders, and checks. Any deposit, fund, check, or other item which is not readily converted into cash should be excluded from the current asset group and shown in a separate classification in the balance sheet.
2. *Accounts receivable* are claims on customers for the payment for goods or services sold on account. Frequently accounts receivable arising from causes other than those in the normal course of trade are listed under separate captions (amounts due from common carriers for lost or damaged goods, for example).
3. *Notes receivable* include all written promises from debtors to pay the amounts due to the business. Like accounts receivable, if the notes arise from causes other than those found in the normal course of trade, they are frequently listed under separate headings.
4. *Merchandise inventory* is the term applied to the value of the stock-in-trade on hand on a given date. Other inventories may be similarly shown—supplies, for example.
5. When the title *other current assets* is used, suitable explanatory information should accompany the items included. Marketable securities of other companies, which are intended to be quickly turned into cash, are frequently listed under a separate caption among the current assets when the amount justifies this treatment.

Under *investments* appear assets represented by shares of stock, bonds, mortgages, negotiable instruments, and the purchase of interests which are not readily marketable or which the business has no intention of placing on the market. Temporary or short-term investments are not included under this caption.

Under *funds* are included sums of money, or other assets, periodically accumulated for some specific purpose. Usually the fund is created to retire some obligation or to purchase an asset.

Prepaid expenses are frequently combined with deferred charges. Both groups contain items the benefits of which are to be received sometime in the future. No cash outlay or new liability will be incurred to secure these benefits. *Prepaid expenses* refer to recurrent items paid in advance: interest, rent, taxes, and like expenses. Since they are usually prepaid for a short period with the life span of the assets limited accordingly, they are sometimes considered current assets. *Deferred charges*, however, usually last much longer and for the most part are non-recurrent items such as organization expense and bond discount. Normally the service has already been partially received and will continue to be received over a number of future fiscal periods; thus, strictly speaking, these deferred charges cannot be considered current assets. This distinction, although recognized by good authority, is not generally accepted as desirable practice. Those opposing the distinction point out that it is difficult to separate the two groups sharply. Moreover, the amount of prepaid items is usually small, and it is convenient as well as conservative to group prepaid expenses and deferred charges together. When this is done, they are, of course, excluded from current assets.

Fixed assets, in contrast to current assets, ordinarily last longer than one fiscal period (*i.e.*, the time elapsing between opening and closing the books) and are kept so long as they continue to serve the needs of the business in carrying on its operations. The distinction between current and fixed assets is based largely on time and intended use. The fiscal period usually serves as the interval of time differentiating between the two. The intended use of each is quite different. Current assets are sold, exchanged, or collected but eventually are converted into cash. Fixed assets

SWIFT &

(An Illinois

CONSOLIDATED BALANCE

(Consolidating All Wholly-owned

Assets

Current Assets:			
Cash			$ 34,761,429.66
Marketable securities at cost or less (market value, $10,842,120.29)			10,641,665.58
Accounts and notes receivable—			
Trade		$ 35,896,082.68	
Other		756,913.54	
		$ 36,652,996.22	
Less: Reserve for doubtful accounts and notes		514,063 71	
			36,138,932.51
Inventories—Products where cost was not ascertainable were valued at approximate market prices, allowing for estimated selling expenses; other products and ingredients and supplies at the lower of cost or market—			
Product		$ 78,166,366.63	
Ingredients and supplies		5,740,854.67	
			83,907,221.30
Due from domestic subsidiaries—not consolidated, current			350,025.17
Total current assets			$165,799,274.22
Investments:			
Securities of subsidiaries—not consolidated—			
Domestic:			
Libby, McNeil & Libby, at cost, less reserve of $1,395,193 84		$ 23,870,759.66	
96,684 Preferred 6% cumulative shares			
1,858,431 Common shares			
A. C. Lawrence Leather Company, at cost, less reserve of $1,813,660 52		8,634,859.58	
955,672 Common shares			
Others		580,811.06	
		$ 33,086,430.30	
Wholly-owned foreign subsidiaries excluding Canada: (see notes)			
Great Britain	$1,798,200.00		
Continental Europe $277,407.20			
Less: Wholly reserved for 277,407.20	—		
		1,798,200.00	
		$ 34,884,630.30	
Miscellaneous securities, at cost		1,231,939.11	
Due from domestic subsidiaries—not consolidated—not current		210,869.21	
			36,327,438.62
Other Assets:			
Equity in mutual casualty company		$ 2,681,729.86	
(Equity based on market value of its investments —$3,692,431.67)			
Long term receivables, less reserve		2,238,982.75	
			4,920,712.61
Fixed Assets:			
Property, plant and equipment, at appraised value January 1, 1914, plus subsequent additions at cost		$197,772,385.17	
Less: Reserve for depreciation and depletion		96,042,644 99	
			101,729,740.18
Prepaid Expenses and Deferred Charges:			
Prepaid insurance and taxes		$ 1,282,164.60	
Expense on first mortgage bond issue (being amortized)		222,507.29	
Miscellaneous deferred charges		313,660.16	
			1,818,332.05
Treasury Stock, 79,465 shares (at market value, October 31, 1936, $23⅜ per share, which is less than cost)			1,857,494.38
Total assets			**$312,452,992.06**

* From the Swift & Company annual report to stockholders.

COMPANY*

Corporation)

SHEET, OCTOBER 28, 1939

Domestic and Canadian Subsidiaries)

Liabilities

Current Liabilities:			
Notes payable			$ 671,250.00
Accounts payable—			
Trade		$ 4,375,567.23	
Other		744,925.63	
			5,120,492.86
Accrued liabilities—			
Interest		$ 635,937.50	
Payrolls		823,861.67	
General taxes		3,248,821.15	
Income taxes for this and prior years (subject to final determination)		4,622,215.75	
Other		148,281.95	
			9,479,118.02
Reserve representing balance of processing taxes as of October 26, 1935, carried in suspense pending final determination as to disposition			8,397,049.14
Other current liabilities—			
Due to domestic subsidiaries—not consolidated		$ 61,584.88	
Due to foreign subsidiaries—not consolidated		1,611,088.98	
Sinking fund payment on first mortgage bonds, due May 15, 1940		1,000,000.00	
			2,672,673.86
Total current liabilities			$ 26,340,583.88
Long Term Debt:			
First mortgage sinking fund 3¾ % bonds, due May 15, 1950—			
Authorized	$50,000,000.00		
Issued		$ 43,000,000.00	
Less: Retired through sinking fund and by call	$6,000,000.00		
Sinking fund payment, due May 15, 1940, provided above	1,000,000.00		
		7,000,000.00	
			36,000,000.00
Reserves:			
General reserve for fire and other contingencies		$ 12,555,767.33	
Reserve for inventory price decline		5,767,000.00	
			18,322,767.33
Capital Stock and Surplus:			
Capital stock, par value $25—			
Authorized and issued—6,000,000 shares		$150,000,000.00	
Earned surplus (of which $1,857,494.38 is appropriated by purchase of treasury stock)		81,789,640.85	
Total shareholders' investment			231,789,640.85
Total liabilities, capital stock and surplus			$312,452,992.06
Contingent liabilities:			
Foreign drafts discounted, etc.		$ 15,994.86	
Possible liability arising out of sundry lawsuits			

are not ordinarily for sale or readily converted into cash. Instead they are consumed or worn out while rendering the service for which they were purchased. The more common titles included in this group are land, buildings, machinery, delivery equipment, and furniture and fixtures.

1. *Land* consists of the ground owned and used by the business.
2. *Buildings* include the edifices owned and used by the business.
3. *Machinery* comprises mechanical equipment used in the manufacture of products for sale.
4. *Delivery equipment* consists of motor trucks, horses and wagons, and any other means of transporting merchandise to the business or to customers.
5. *Furniture and fixtures* include such items as showcases, counters, desks, chairs, filing cabinets, and other equipment needed by the office force, by the selling department for display, or for the storing of merchandise.

Intangibles include organization expenses,[1] goodwill, patents, trade-marks, copyrights, franchises, and similar items in contrast to assets thought to have values of a more determinable nature, like machinery and buildings. The use of this caption is largely a convention—all assets excluded cannot be considered tangible, *e.g.*, accounts receivable.

Reserves (or Allowances) against Assets.—Reserves, or allowances, against current assets are deductions from the value of the asset to which they refer and are used to determine the book value of the asset. The title reserve for doubtful accounts, for example, contains the estimated amount of uncollectible accounts. This is deducted from the total of outstanding accounts receivable to determine their estimated cash realizable value.

Reserves against fixed assets operate in a similar manner. For example, the decline in the value of an asset due to wear while in operation is accumulated in the account reserve for depreciation. The book value of the fixed asset therefore is the difference

[1] Organization expense is sometimes listed as a deferred expense. This implies that it is being written off against current operations. Under the regulations of the Bureau of Internal Revenue most intangible assets may not be written off as allowable deductions.

between the balance in the asset account and that in the reserve account. The reserve account can in no sense be considered as containing an amount of assets or a fund set aside for a specific purpose; it merely represents deductions from the value of the asset to which it refers.

Principal Liability Groupings.—The distinction between current and fixed items is made not only for assets but also for liabilities. The principal liability groupings are current, long-term, and unearned income. *Current liabilities* are those obligations to outside parties for which no special funds have been established and which have to be paid within a comparatively short time, usually one year. The following list comprises the more common titles.

1. *Accounts payable* are amounts owed for credit purchases. If the respective amounts are appreciable, a distinction should be made between accounts payable arising from normal business purchases of goods or services and those arising from other sources.
2. *Notes payable* include all written unconditional promises made by the business to pay a sum of money at a definite future time, either to order or to the bearer and signed by a properly authorized person in the organization. Usually only those maturing within one year are included. Notes payable arising from causes other than transactions dealing with the purchase of merchandise are frequently classified separately (a short-term note payable to the bank, for example).
3. *Accrued liabilities* are the current obligations existing at the close of the fiscal period, not yet due, but which nevertheless are owed by the enterprise. They usually include such recurring items as wages, rent, and interest. For example, an item of accrued wages arises when at the close of the fiscal period there is an amount of wages owed to the workers but not yet due and payable to them.

Three criteria are used to distinguish a *long-term liability* from a current liability: the purpose, the manner of payment, and the maturity of the debt.

Current liabilities are incurred to finance short-term operations and must be paid within a reasonably short time. In contrast

the funds provided from long-term obligations are ordinarily used for investments of a comparatively permanent character, to finance expansions or fixed assets, for example.

Long-term obligations may be settled by refunding, by payment from a special fund, or from current assets. If they are refunded, new securities are sold and the proceeds received from their sale are used to pay off the maturing debt. If a special fund has been established to accumulate the means of discharging the obligation, then payment is made from this source. If a liability is settled by either method, it should be classified as a long-term obligation.

If, however, no special provision has been made for its payment and it is paid from current assets, then it differs from a current liability solely on the basis of maturity, and it should be classified as a current liability, if due within the fiscal period.

Typical long-term liabilities are notes payable (with a maturity date of more than one year), bonds, and mortgages.

1. *Notes payable* (defined on page 15) are listed under long-term liabilities only when they mature more than one year from the date of the balance sheet.
2. *Bonds* are written promises, under seal, to pay a definite amount, with interest, at some determinable future date. Frequently they are secured by pledges of specific properties.
3. *Mortgages payable* consist of long-term promissory notes secured by a transfer of property as security, with the provision that such transfer will be voided if the conditions of the mortgage are fully satisfied.

Unearned income is revenue for which cash, receivables, or other assets have been obtained but which belongs to a subsequent fiscal period. Interest income or rent income collected in advance are examples. Unearned income must be considered a liability because the business has an obligation to render a service to those who have paid in advance. Since the obligation is to be paid in service, not in cash, it can scarcely be considered either a current or long-term liability; instead, it is accorded a separate section in the balance sheet.

Principal Net Worth Groupings.—The *net worth* section of the balance sheet contains the equity or rights of the proprietors in the assets of the business. The manner in which proprietorship

is expressed depends on the type of business organization. If the enterprise is owned by one man, his capital contributions that are relatively permanent are recorded under the heading capital preceded by the name of the proprietor (*e.g.*, J. Jones, capital). Current changes in the proprietor's investment arising from transactions between the owner and the business are usually recorded in an account with the title personal or drawing preceded by the name of the owner (J. Jones, personal, for example).

If the business is in the form of a partnership, the same arrangement is followed as for a sole proprietorship, except that instead of considering the proprietorship of one owner, the equities of two or more appear in the net worth section.

If the company is incorporated, the equity *capital stock* represents the transferable shares of the corporation. Individual shares of capital stock are not shown in the balance sheet. The authorized capital stock is the total amount that the state in which the corporation is organized permits it to issue. The value of each interest or share specified in the charter is known as the par value. If the stock is sold for less than its par value, it is sold at a discount; if for more than its par value, it is sold at a premium. Many states permit corporations to issue stock without a par value. When this is done, the issuing corporation is authorized to sell a specified number of shares and the capital stock equity of the stockholders is equal to the amount paid for the stock.

For the most part, current additions or deductions to the stockholder's equity are made in *surplus*, which contains the accumulated earnings of the corporation and, together with capital stock, constitutes the equity of the owners (see page 172 for a distinction between types of surplus).

Determination of Profit or Loss by Balance Sheet Comparisons. From the point of view of the owner there are two sets of facts, above all others, which he expects to be able to obtain from his books: first, the value of his equity; second, whether this value is increasing or decreasing. The function of the balance sheet is to exhibit the first fact; it is even possible for the second fact to be furnished by a comparison of balance sheets. Thus, if the value of John Ade's proprietorship on January 1, 19__, was $11,500 and at the end of the year, December 31, 19__, it had increased to $13,250 and, further, if he invested $500 additional cash and

withdrew $250 from his equity during the year, the profit from business operations would be $1,500.[1]

The Profit and Loss Statement.[2]—The determination of profit or loss by a comparison of balance sheets is, after all, a most unsatisfactory method. A mere statement of the amount of the increase or decrease in proprietorship due to business operations is of limited use. To control operations, it is essential to know the manner in which the increase or decrease in proprietorship occurred. This is the function of the profit and loss statement. It explains the change in proprietorship due to business operations. It may be defined as the statement which shows in detail the sources of revenue or income earned[3] (the flow of goods or services during a given period of time in exchange for funds or other assets received from customers) during a fiscal period, the

[1] Withdrawals or investments must be eliminated from the owner's account in order to determine profit by a comparison of proprietorship accounts. If in the case under consideration Ade invested $500 and withdrew $250 during the year, the capital account of December 31, 19__, would be adjusted by deducting the investments and adding the withdrawals to determine what it would have been if affected only by business operations. The resultant capital account balance of $13,000 when compared with the $11,500 balance in Ade's proprietorship account of December 31, 19__, would show a profit of $1,500.

[2] Throughout the text, terms in general use rather than those which the writer believes are preferable have been used. The title profit and loss statement, for example, although widely used, is not as descriptive of its contents as is the title statement of expense and revenue. From the standpoint of management a classified statement of expense and revenue is more important than the amount of profit or loss (which has been previously determined in the profit and loss account). Moreover, the statement usually does not contain both a profit and a loss even if the generic use of the terms is accepted.

The "Accountants' Handbook" gives preference to the title income sheet to that of profit and loss statement. Other titles which it cites are "profit and loss account; income account; statement of income, profit, and loss; statement of operating results; statement of earnings; statement of expense and revenue; revenue statement; summary of income and expense; statement of income and capital account; statement of loss and gain; trading, profit and loss statement." Paton, *op. cit.*, p. 6.

[3] The terms "revenue" and "income" are commonly used interchangeably. When a distinction is made, revenue is measured by (but must not be confused with) the cash and other assets given by customers in exchange for the sales of commodities or services. Income emerges after all costs applicable to the revenue of the fiscal period are deducted.

cost of obtaining the revenue, and the resultant profit or loss. An explanation of the fact that John Ade's profit for the fiscal year ending December 31, 19__, was $1,500 assumes more significance when shown in the following form than when obtained by comparing the proprietorship sections in two successive balance sheets.

JOHN ADE

PROFIT AND LOSS STATEMENT

For the Period January 1, 19__, to December 31, 19__

Net sales			$25,230
Merchandise inventory, January 1, 19__	$ 2,225		
Merchandise purchases	18,000		
Goods available for sale		$20,225	
Merchandise inventory, December 31, 19__		3,000	
Cost of goods sold			17,225
Gross profit[1]			8,005
Selling expenses	3,372		
General administrative expenses	3,108		
Total operating expenses			6,480
Net operating profit			1,525
Nonoperating expenses:			
Interest			25
Net profit			$ 1,500

Another illustration of the profit and loss statement, in greater detail and hence of more benefit for the purpose of discussing content, is the statement on page 20.

Regardless of the form assumed by the statement, some attempt is usually made to distinguish between the principal activities of the business and those incidental to the performance of the main function. Revenues and expenses concerned with the most important activities are grouped under an "operating" section; revenues and expenses concerned with incidental activities are grouped under a "nonoperating" section. It is fre-

[1] Some writers believe that the term "gross margin" should be substituted for that of "gross profit." These writers believe that profit can be determined only after all expenses are deducted from the revenue of a period. Therefore any intermediate profit such as gross profit is misleading and tends to confuse the reader. For a more complete presentation see W. A. Paton, "Essentials of Accounting," pp. 756–757, The Macmillan Company, New York, 1938.

SWIFT & COMPANY

(An Illinois Corporation)

Consolidated Income Statement and Surplus Account for the Period from October 29, 1938 to October 28, 1939

(Consolidating All Wholly-owned Domestic and Canadian Subsidiaries)

Sales (including service revenues)			$756,731,536.99
Cost of sales and service, including transportation, but excluding the charges deducted below			678,748,063.03
			$ 77,983,473.96
Selling (including expense of the distributing houses), advertising, general and administrative expenses		$48,740,368.16	
Depreciation and depletion (see notes)		6,818,751.27	
Taxes (other than federal income taxes)		7,844,665.83	
Contribution to Pension Trust (see notes)		2,170,138.07	
Provision for doubtful accounts		653,694 93	
			66,227,618.26
Operating income			$ 11,755,855.70
Other income:			
Dividends received—			
From subsidiaries—not consolidated:			
Domestic		$ 656,031.22	
Foreign, to extent earned in current year (see notes)	$734,350.27		
Less: Losses of foreign subsidiaries for year taken up (see notes)	8,014 49		
		726,335.78	
From miscellaneous securities		96,984.82	
		$ 1,479,351.82	
Interest from miscellaneous securities, etc		240,517.16	
Miscellaneous—net		17,552.76	
			1,737,421 74
			$ 13,493,277.44
Interest charges:			
On funded debt, including amortization of expense on first mortgage bond issue		$ 1,436,664.86	
Other interest		21,016.48	
			1,457,681.34
			$ 12,035,596.10
Special credits:			
Special distribution by mutual casualty company		$ 763,094.20	
Profit on sale of securities—net		156,325.01	
Realized gain on foreign exchange		284,730.37	
			1,204,149 58
			$ 13,239,745.68
Loss on sale, dismantling and retirement of fixed property—net			837,035 80
			$ 12,402,709.88
Provision for Federal income taxes			2,081,187.23
Balance for year carried to earned surplus account			$ 10,321,522.65

Note: The treatment accorded profits or losses of foreign subsidiaries is defined in the accompanying notes. As to the Canadian subsidiary consolidated, its profit earned for the year included above of $143,666.20 is before providing for the unrealized loss of $736,701.89 in converting to U. S. Dollars its net current assets spread in the consolidated balance sheet herewith, which is included in the charge of $742,403.05 against the consolidated earned

Earned Surplus Account*

Surplus, October 29, 1938		$ 78,318,310.56
Deduct:		
Earned surpluses of foreign subsidiaries—not consolidated, heretofore taken up in consolidated surplus to October 29, 1938 now eliminated		1,823,293.87
Surplus as adjusted, October 29, 1938		$ 76,495,016.69
Balance of net income for year as above		10,321,522.65
		$ 86,816,539 34
Dividends paid:		
January 1, 1939, 30¢; April 1, 1939, 30¢; July 1, 1939, 30¢; October 1, 1939, 30¢		7,104,131.10
		$ 79,712,408.24
Add:		
Restoration of certain depreciation provisions in prior years not allowable as deductions for income taxes	$ 3,753,732.68	
Dividends received from foreign subsidiaries—not consolidated, in excess of their profits for current year (see notes)	520,204.73	
		4,273,937.41
		$ 83,986,345.65
Deduct:		
Additional provision for federal income taxes for prior years	$ 700,000.00	
Investments in subsidiaries in Continental Europe now wholly reserved for	277,407.20	
Miscellaneous investments and other accounts in Continental Europe now written off	476,894.55	
Unrealized loss in converting net current assets of the Canadian subsidiary and foreign accounts of Swift & Company into U. S. Dollars at year end rate of exchange, net	742,403.05	
		2,196,704.80
Surplus, October 28, 1939		$ 81,789,640 85

* From the Swift & Company annual report to stockholders.

quently difficult to allocate certain items to a particular section, but the separation of activities into these two groups has been accorded wide acceptance in practice.

Aside from this distinction, which is usually made, several main captions are ordinarily found which may well serve as the basis for a brief discussion of the principal groupings in the statement. These are as follows: gross sales; deductions from sales; cost of goods sold; gross profit; operating expenses; operating profit or loss; nonoperating expenses; nonoperating income; net profit or loss.

surplus account. As to the foreign subsidiaries not consolidated, the part of the dividends received taken up above represents their current year's profits before considering the unrealized loss of $600,106.77 in converting their net current assets, which has been charged against their surplus accounts. These surplus accounts have been eliminated this year from the consolidated surplus account herewith, by the charge thereto of $1,823,293.87.

Principal Groupings in the Profit and Loss Statement.—The term *gross sales* includes all sales made or services rendered, without deductions, during the fiscal period. From gross sales various items are subtracted to determine net sales. The principal deductions are *sales returns* (goods returned to the company making the sale) and *sales allowances* (goods not returned but the amount of the original billing reduced). These two items are usually combined under a single caption.

Because of its importance as a comparison with net sales, *cost of goods sold* is usually separated from other expenses, and the method of its computation is indicated in the profit and loss statement. The cost of goods sold figure may be obtained by keeping records of the goods sold at their cost price. Another method consists of first determining all the goods available for sale during the period covered by the statement. This is done by adding to the merchandise on hand at the beginning of the fiscal period the net purchases made during the period (net purchases are determined by adding to gross purchases all freight-in or transportation costs, and deducting from this total all purchase returns and allowances).[1] Normally two things happen to the goods available for sale: some are sold, in which case they become the cost of goods sold, and some remain on hand in the form of an inventory.[2] Hence, if the final inventory (which must be counted and priced) is deducted from the goods available for sale, the remainder will be the cost of goods sold. When the cost of goods sold is deducted from the net sales, the result is *gross profit.*

Operating expenses are the costs incurred which are essential to obtain the main source of revenue. Expenses should be grouped in such a manner as to correspond to the structure or organization of the business, so that responsibility by departments or some other functional division may be determined.

Operating expenses are frequently divided into two sections: selling expenses and general administrative expenses. *Selling expenses* include all costs of marketing. Typical selling expenses are salaries or commissions paid to those directly concerned with

[1] This is the usual computation. There may, however, be other additions or deductions.

[2] This precludes, of course, the possibility of the merchandise deteriorating, of its theft, or of losses due to changed methods of valuation or other factors.

marketing the product; advertising, which consists of publicity costs incurred to increase sales; delivery expense, which includes the cost of transporting goods sold to the customer; depreciation on furniture and fixtures used by the sales department; and any other expense the cost of which might be attributed directly to the function of selling. *General administrative expenses* cannot be allocated to any department performing a specific function, hence they are classified under a general heading. The following are examples: office expense, which includes postage, stationery, envelopes, and other office supplies used during the fiscal period; depreciation on office equipment; general insurance; and miscellaneous taxes. The excess of gross profit over operating expenses is called *operating profit* and indicates the profitableness of the main operations of the business.

In contrast to the operating section of the profit and loss statement, the *nonoperating section* includes income and expense items not directly related to the main activity of the business. Interest received from temporary investments held by a small retail establishment would ordinarily be classified as nonoperating income. If the securities were sold below cost, the loss suffered would usually be treated as a nonoperating expense.[1] Nonoperating expenses are deducted from operating profit, and nonoperating income is added (or subtracted, if a loss) to it to determine *net profit* (or *net loss*) for the period.

Statement of Change in Net Worth.—To supplement the profit and loss statement as a device to explain the variations in proprietorship, the *statement of change in net worth* is used. This statement shows not only the change in net worth due to business operations, as disclosed by the profit and loss statement, but also the other major causes for changes in proprietorship.

Data in the illustration on page 17, when arranged in the form of a statement of change in net worth, will appear as shown on page 24.

There is no essential difference in the form of the statement prepared for a partnership from that of one prepared for a sole

[1] There is widespread agreement among accountants that the nonoperating section should include items incidental to the main activity of the business. There is no such agreement as to what should be included. Discounts on purchases, discounts on sales, interest expense, and interest income are at times treated as operating and at times as nonoperating items.

JOHN ADE

STATEMENT OF CHANGE IN NET WORTH

January 1, 19__, to December 31, 19__

John Ade, capital, January 1, 19__	$11,500
Net profit for the year	1,500
Add additional investments	500
	$13,500
Deduct withdrawals	250
John Ade, capital, December 31, 19__	$13,250

proprietorship. Instead of the equity of a single proprietor, the equities of two or more partners are considered. For a corporation, however, the changes in net worth are presented for the most part in the capital stock and surplus accounts. The principal additions to surplus are the earnings of the corporation, and the principal deductions are the distribution of earnings to the stockholders in the form of dividend payments. The net worth structure of the corporation is so different from that of the individual proprietorship or partnership that the title statement of change in net worth is usually altered to statement of surplus (see page 21).

Relations between the Statements.—An objective of fundamental importance in accounting is the distinction between the capital and income of a business. Capital may be defined as a stock of wealth; income as a flow of goods or services which increases that wealth. The basic statements in accounting are designed to recognize this distinction.

The balance sheet is a statement of financial position; it shows the wealth or resources of a business at a particular time together with the equities or rights in those resources.

The profit and loss statement shows the origin of the income, the cost of securing it, and the increase (net profit) or decrease (net loss) in proprietorship due to the activities of the business.

The statement of change in net worth shows significant changes in the proprietorship equity, due not only to regular business operations in terms of net profit or loss but also to other causes which increase or decrease the net worth of a business.

The Accounting Period.—The concept of an accounting or fiscal period is of prime importance since it affects all elements appearing in the statements. The figures in the statements must be interpreted in terms of the length of the accounting period.

Clearly, the amount of sales for a six-month period is not comparable with the amount of sales in the same business for one year.

The length of the accounting period varies according to the requirements of the industry and the needs of management. Probably the length of time most often used is the fiscal year, which may or may not coincide with the calendar year. Semiannual, quarterly, and monthly periods, however, are commonly used.

Questions

Review.

1. Explain the following terms:

(1) Balance sheet
(2) Current assets
(3) Cash
(4) Accounts receivable
(5) Notes receivable
(6) Merchandise inventory
(7) Investments
(8) Sinking fund
(9) Prepaid expenses
(10) Deferred charges
(11) Fixed assets
(12) Land
(13) Buildings
(14) Machinery
(15) Delivery equipment
(16) Furniture and fixtures
(17) Intangibles
(18) Reserve for doubtful accounts
(19) Reserve for depreciation of machinery
(20) Current liabilities
(21) Accounts payable
(22) Notes payable
(23) Accrued liabilities
(24) Long-term liabilities
(25) Bonds
(26) Mortgages payable
(27) Unearned income
(28) Capital stock
(29) Surplus
(30) Profit and loss statement
(31) Gross sales
(32) Net sales
(33) Sales returns
(34) Sales allowances
(35) Cost of goods sold
(36) Gross margin
(37) Operating profit
(38) Operating expenses
(39) Selling expenses
(40) General administrative expenses
(41) Net profit
(42) Statement of change in net worth

2. What is the accounting equation? Explain how the balance sheet is an expression of this equation.

3. In what respect is the profit and loss statement an expression of the accounting equation?

4. Give three criteria for distinguishing between a current liability and a long-term liability.

5. Explain how profit or loss can be determined by a comparison of balance sheets. What are the shortcomings of such a procedure? How does the profit and loss statement overcome these defects?

6. Distinguish between a selling expense and a general administrative expense.
7. What is the relation between the balance sheet and the profit and loss statement? Between the statement of net worth and the balance sheet?
8. Why is the concept of a fiscal period so important in accounting?

Discussion.

9. With which items or sections of the balance sheet would you be most concerned if you intended to buy an interest in the enterprise? If you intended to extend a long-term loan? If you intended to extend a short-term loan?
10. From the standpoint of management, which statement is more important, the balance sheet or the profit and loss statement?
11. "The balance sheet is a statement of position; the profit and loss statement a statement of progress." Explain.
12. Is there any relation between cash receipts and revenue? Between cash expenditures and expenses? Is the net profit for a period equal to the excess of cash receipts over cash disbursements for the same length of time?
13. Should prepaid expenses be listed under current assets or under deferred charges?
14. Should investments appear among the current assets in a balance sheet? Discuss.
15. What are the principal additions and deductions to be found in a statement of net worth if the enterprise is
    a. A single proprietorship
    b. A partnership
    c. A corporation

Suggested Supplementary Readings

KESTER, R. B.: "Principles of Accounting," 4th ed., Chaps. 2 and 3, The Ronald Press Company, New York, 1939.

MACFARLAND, G. A., and R. D. AYARS: "Accounting Fundamentals," Chaps. 2, 3, and 4, McGraw-Hill Book Company, Inc., New York, 1936.

PORTER, G. H., and W. P. FISKE: "Accounting," Chap. 3, Henry Holt & Company, Inc., New York, 1935.

PRICKETT, A. L., and R. M. MIKESELL: "Principles of Accounting," Chaps. 1 and 2, The Macmillan Company, New York, 1937.

SANDERS, T. H., H. R. HATFIELD, and U. MOORE: "A Statement of Accounting Principles," pp. 25–97, American Institute of Accountants, New York, 1938.

CHAPTER III

BASIC BOOKS

The statements discussed in the previous chapter are prepared at the close of an accounting period. During the period, however, changes are occurring in the various asset and equity elements. The device used to record these changes is known as the *account*. It may be defined as a systematic arrangement whereby changes in asset and equity elements are recorded.

Development of the Account.—The relation between the statements and the basic equation, discussed in the previous chapter, is a close one. The necessity for using accounts and the manner in which they are employed may also be demonstrated by expanding the basic equation.

Assume that on February 1 William Moore invested the following asset and equities in a small retail business: cash, $1,000; furniture and fixtures, $450; equipment, $1,250; accounts payable, $750; notes payable, $250. When this information is recorded in the form of the basic equation (Assets = Liabilities + Proprietorship), it appears as follows:

Cash, $1,000 + furniture and fixtures, $450 + equipment, $1,250 = accounts payable, $750 + notes payable, $250 + W. Moore, capital, $1,700

In balance sheet form this is shown as follows:

W. MOORE

BALANCE SHEET, FEBRUARY 1, 19__

Assets		Liabilities	
Cash	$1,000	Accounts payable	$ 750
Furniture and fixtures	450	Notes payable	250
Equipment	1,250		
		Proprietorship	
		W. Moore, capital	1,700
	$2,700		$2,700

Assume further that the following transactions or business occurrences took place during February:

February 3. Moore invested additional cash, $250.
10. Additional equipment was purchased for cash, $125.
12. Furniture was purchased on credit, $75.
15. Cash was disbursed in payment of an account, $150.
16. A note of $250 was given in payment of an account.
17. A note payable was paid, $100.
20. Moore withdrew cash, $50.

Expressed in the form of the basic equation, these data (including the item of February 1) are recorded as follows:

(1) Cash, $1,000 + furniture and fixtures, $450 + equipment, $1,250 = accounts payable, $750 + notes payable, $250 + W. Moore, capital, $1,700.
(3) Cash, $1,250 + furniture and fixtures, $450 + equipment, $1,250 = accounts payable, $750 + notes payable, $250 + W. Moore, capital, $1,950.
(10) Cash, $1,125 + furniture and fixtures, $450 + equipment, $1,375 = accounts payable, $750 + notes payable, $250 + W. Moore, capital, $1,950.
(12) Cash, $1,125 + furniture and fixtures, $525 + equipment, $1,375 = accounts payable, $825 + notes payable, $250 + W. Moore, capital, $1,950.
(15) Cash, $975 + furniture and fixtures, $525 + equipment, $1,375 = accounts payable, $675 + notes payable, $250 + W. Moore, capital, $1,950.
(16) Cash, $975 + furniture and fixtures, $525 + equipment, $1,375 = accounts payable, $425 + notes payable, $500 + W. Moore, capital, $1,950.
(17) Cash, $875 + furniture and fixtures, $525 + equipment, $1,375 = accounts payable, $425 + notes payable, $400 + W. Moore, capital, $1,950.
(20) Cash, $825 + furniture and fixtures, $525 + equipment, $1,375 = accounts payable, $425 + notes payable, $400 + W. Moore, capital, $1,900.

If there were no further transactions during February, the balance sheet on February 28 will appear as follows:

Assets		Liabilities	
Cash	$ 825	Accounts payable	$ 425
Furniture and fixtures	525	Notes payable	400
Equipment	1,375		
		Proprietorship	
		W. Moore, capital	1,900
	$2,725		$2,725

Conceivably, in a business with very few transactions, changes in asset and equity elements might be recorded by direct balance sheet adjustments. Even in a small business, however, the presence of any considerable number of transactions would make this method cumbersome. It becomes clerically impracticable in a business of any appreciable size where a multiplicity of transactions occur during the course of a business day.

Moreover, certain transactions are of such a nature as to preclude the possibility of direct balance sheet adjustments. It would be difficult, for example, to know the immediate effect of a sale upon the financial condition of a business; proprietorship is not increased by the total amount of the sale, for the cost of it must first be deducted. Such a computation of costs, by each sale, would be highly impractical, if not impossible, in ordinary cases. Furthermore, some changes occur in such a manner as to make them impossible of continuous measurement; depreciation, for example.

Structure and Operation of the Account.—The account overcomes these difficulties. In order to fulfill its function of recording changes in asset and equity elements, the account should provide for three things: a balance; increases to the balance; and decreases to the balance. These requirements are provided by the so-called T account illustrated below.

Cash

Balance Increases	Decreases

Operation of the account follows the same general principles as does that of the basic equation or the balance sheet. Asset balances are placed on the left-hand or *debit* side of accounts; liability and proprietorship balances on the right-hand or *credit* side. When, for example, the owner invests an additional amount of cash (see item under date of February 3 in the illustration of page 28), it increases the asset account cash and is placed on the debit side. The owner's account is likewise increased, and, since it is an equity, the amount is placed on the credit side. If we record the transactions of Moore's business for the month of February, these data will appear as shown in the following accounts:

CASH (Asset)

(Debit)			(Credit)		
Feb. 1	Balance	1,000	Feb. 10		125
3		250			

FURNITURE AND FIXTURES (Assets)

(Debit)			(Credit)		
Feb. 1	Balance	450			

EQUIPMENT (Asset)

(Debit)			(Credit)		
Feb. 1	Balance	1,250			
10		125			

ACCOUNTS PAYABLE (Liability)

(Debit)			(Credit)		
Feb. 15		150	Feb. 1	Balance	750

NOTES PAYABLE (Liability)

(Debit)			(Credit)		
Feb. 17		100	Feb. 1	Balance	250
			16		250

W. MOORE, CAPITAL (Net Worth)

(Debit)			(Credit)		
Feb. 20		50	Feb. 1	Balance	1,700
			3		250

Debiting and Crediting Accounts.—Thus, from an examination of these typical transactions and the manner in which they are recorded in the T accounts, it is apparent that all increases in assets are recorded on the debit side; all increases in liabilities and proprietorship on the credit side; all decreases in assets on the credit side; all decreases in liabilities and proprietorship on the debit side. In summarized form the rule for debiting and crediting accounts is as follows:

Debit to

1. Increase an asset
2. Decrease a liability
3. Decrease an item of proprietorship

Credit to

1. Decrease an asset
2. Increase a liability
3. Increase an item of proprietorship

In applying the rule of debit and credit to the expense and revenue accounts, the relationship between net worth and these accounts should be borne in mind. Expense and revenue accounts explain the change in proprietorship due to business operations. Temporarily expense reduces and revenue increases proprietorship. What the ultimate effect upon net worth will be can be ascertained only when all expenses belonging to a fiscal period are compared with all revenue earned during the same period. If revenue exceeds expenses, the result is a profit; if expenses exceed revenue, the result is a loss.

It is impractical to record these transactions directly under proprietorship because the large volume of such transactions would render the net worth account too cumbersome. The various revenue and expense items would be so intermingled in the proprietorship account as to make it difficult to know the amount of any specific element; hence much significant information would be lost to management.

To illustrate the operation of these accounts, assume that during the month of March, the following summarized transactions[1] occurred in Mr. Moore's business:

March 1. Paid rent for March, $80.
31. Purchased merchandise on account, $420; for cash, $265 (of the purchases made $175 worth of merchandise was on hand at the end of the month and $510 worth of merchandise was sold).[2]
Sold merchandise on account, $525; for cash, $325.
Paid clerk's salary, $75.
Received cash from customers, $275.
Paid cash to creditors, $450.

The February and March data would be recorded in the accounts as follows:

[1] Summarized transactions are given here in order to provide a simple illustration. Such summaries are not, however, typical of recommended accounting procedures.

[2] Current purchases of merchandise are entered in the expense account purchases. At the close of the fiscal period the value of goods on hand is transferred from the purchases account to the asset account inventory.

CASH (Asset)

(Debit)			(Credit)		
Feb. 1	Balance	1,000	Feb. 10		125
3		250	15		150
Mar. 31		325	17		100
31		275	20		50
			Mar. 1		80
			31		265
			31		75
			31		450

ACCOUNTS RECEIVABLE (Asset)

(Debit)		(Credit)	
Mar. 31	525	Mar. 31	275

MERCHANDISE INVENTORY (Asset)

(Debit)		(Credit)	
Mar. 31	175		

FURNITURE AND FIXTURES (Asset)

(Debit)		(Credit)	
Feb. 1	450		
12	75		

EQUIPMENT (Asset)

(Debit)		(Credit)	
Feb. 1	1,250		
10	125		

ACCOUNTS PAYABLE (Liability)

(Debit)		(Credit)	
Feb. 15	150	Feb. 1	750
16	250	12	75
Mar. 31	450	Mar. 31	420

NOTES PAYABLE (Liability)

(Debit)		(Credit)	
Feb. 17	100	Feb. 1	250
		16	250

W. Moore, Capital (Net Worth)

(Debit)			(Credit)		
Feb. 20		50	Feb. 1		1,700
			3		250

Sales (Revenue)

(Debit)			(Credit)		
Mar. 31	To profit and loss	850	Mar. 31		850

Purchases (Expense)

(Debit)			(Credit)		
Mar. 31		420	Mar. 31		175
31		265	31	To profit and loss	510

Rent (Expense)

(Debit)			(Credit)		
Mar. 1		80	Mar. 31	To profit and loss	80

Salary (Expense)

(Debit)			(Credit)		
Mar. 31		75	Mar. 31	To profit and loss	75

Profit and Loss Account

(Debit)			(Credit)		
Mar. 31	Purchase balance	510	Mar. 31	Sales balance	850
31	Rent	80			
31	Salary	75			
	To W. Moore, capital	185			

Items of revenue are credited to the account sales because the effect is to increase proprietorship; items of expense are debited to the accounts salary and rent because the effect is to reduce proprietorship. In order to summarize the net effect of operations on proprietorship, all the expense and revenue accounts are transferred to a summary account called "profit and loss" which, in this case, shows a profit for the month. This balance is then transferred to the proprietorship account to show an increase in the capital account by the amount of the profit.

If there were no other transactions during the month, the balance sheet of March 31 will appear as follows:

Assets		Liabilities	
Cash	$ 555	Accounts payable	$ 395
Accounts receivable	250	Notes payable	400
Merchandise inventory	175		
Furniture and fixtures	525	Proprietorship	
Equipment	1,375	W. Moore, capital	2,085
	$2,880		$2,880

The profit and loss statement for the two months of February and March would be:

Sales		$850
Less cost of goods sold		510
Gross profit		340
Less Rent	$80	
Salary	75	155
Net profit		$185

Classification of Accounts in the Ledger.—The book or file wherein the accounts are kept is known as a *ledger*. Accounts are arranged in the ledger to facilitate the preparation of the important statements—the accounts in the balance sheet appear first, then those in the profit and loss statement. This arrangement results, of course, in the following five classifications:

Balance sheet

1. Assets
2. Liabilities
3. Net worth

Profit and loss statement

4. Revenue
5. Expenses

While all account classifications follow this arrangement, at least in general outline, amplifications and refinements are usually necessary.

Account Numbering Systems.—In addition to titles which should clearly explain the contents, numbers or other means of identification are frequently given to the accounts. In large corporations particularly this may save time and expense in referring to the accounts. The following numbering system, based on the accounts discussed in Chapter II, offers an illustra-

tion of a flexible method which can be used to advantage in a moderately sized enterprise.[1]

1 Assets
  11 Current assets
    111 Cash
    112 Accounts receivable
    113 Reserve for doubtful accounts
    114 Notes receivable
    115 Merchandise inventory
    116 Prepaid expenses
  12 Long-term investments
  13 Fixed assets
    131 Land
    132 Buildings
    133 Reserve for depreciation on buildings
    134 Machinery
    135 Reserve for depreciation on machinery
    136 Delivery equipment
    137 Reserve for depreciation on delivery equipment
    138 Furniture and fixtures
    139 Reserve for depreciation on furniture and fixtures
  14 Intangible assets
  15 Other assets
2 Liabilities
  21 Current liabilities
    211 Accounts payable
    212 Notes payable
    213 Accrued expenses
  22 Long-term liabilities
    221 Long-term notes
    222 Mortgages payable
    223 Bonds payable
  23 Other liabilities
3 Net worth
  31 Capital stock
  32 Surplus

[1] For numerous illustrative classifications and numbering systems see the "Accountants' Handbook," p. 165*ff*. For a more detailed discussion of classification and numbering of accounts than is afforded in the text, see R. B. Kester, "Principles of Accounting," pp. 659–669, The Ronald Press Company, New York, 1939.

The Journal.—Thus far the discussion has proceeded as though business occurrences were recorded directly to the accounts—a method which, in fact, is not followed. Clerically such a process would be tedious. Furthermore the account is not designed to receive detailed information about transactions, but to record changes in single asset or equity elements. It is the function of the *journal* to tell the story of the transaction; to show the date on which it occurred; its effect on the accounts involved; and the amounts by which the accounts are changed; and finally to supply any further explanation which may be required.

In appearance the simple journal frequently assumes the following form:

General Journal Form

a	*b*	*c*	*d*	*e*	*f*

Columns *a* and *b* are used for the date of the transaction—month and day, respectively; in column *c* the names of the accounts debited and credited are written and also the explanation of the transaction; column *d* is the folio column, in which is placed the page number of the ledger account to which a given amount is carried; column *e* is the debit amount column; column *f* the credit amount column.

Relation between Basic Books and Statements.—The relation between basic books and statements in accounting is a coherent one, and an appreciation of this relationship is essential to an understanding of the accounting cycle. As business occurrences alter the status of asset and equity elements in the statements, the increases or decreases are recorded in the accounts. It is the function of the accounts appearing in the ledger to show the changes in asset and equity elements. The story of the business occurrence, or transaction, cannot, however, be conveniently told in the ledger. Instead it is recorded in the journal, after which increases or decreases in particular asset or equity elements are carried to their respective accounts in the ledger.

Details of these relationships are elaborated in the three succeeding chapters on the accounting cycle.

Questions

Review.

1. What is the relation between the statements and the accounts?
2. What are the essential requirements of an account?
3. Give reasons for the development of the account.
4. Give a summarized rule for debiting and crediting accounts.
5. Discuss the relation between net worth and the expense and revenue accounts.
6. In what order should accounts appear in the ledger?
7. Give a classification of accounts.
8. Explain the purpose of a system of numbering accounts.
9. Define:
   a. Debit
   b. Credit
   c. Account
   d. Ledger
   e. Journal
   f. Profit and loss account
10. Explain the relation between the journal and the ledger.
11. What is the function of the journal? Of the ledger?
12. Discuss the relationship between the basic books and statements in accounting.

Discussion.

13. What determines the account titles used in the ledger?
14. Why is it important to select the account titles with considerable care?
15. Is it possible to show all important facts of the business in the accounts? Explain.
16. When should explanations be given to journal entries?
17. The courts give preference to journal records instead of ledger records when the books are presented as evidence. Why?

Suggested Supplementary Readings

Bolon, D. S.: "Introduction to Accounting," Chaps. 5 and 6, John Wiley & Sons, Inc., New York, 1938.

Husband, G. R., and O. E. Thomas: "Principles of Accounting," Chaps. 4, 5, and 6, Houghton Mifflin Company, Boston, 1935.

Kester, R. B.: "Principles of Accounting," 4th ed., Chap. 4, The Ronald Press Company, New York, 1939.

MacFarland, G. A., and R. D. Ayars: "Accounting Fundamentals," Chaps. 5, 6, and 7, McGraw-Hill Book Company, Inc., New York, 1936.

Rorem, C. R.: "Accounting Method," Chaps. 4 and 6, University of Chicago Press, Chicago, 1930.

CHAPTER IV

THE ACCOUNTING CYCLE

"The balance sheet may be considered as the groundwork of all accountancy, the origin and the terminus of every account"[1] is a statement frequently cited when discussing the continuity of accounting operations. It means, of course, that the balance sheet, which shows the financial structure of a business, is the point of departure in the cycle of accounting operations. Subsequent transactions alter the financial structure of the enterprise. The goal to which all operations in the accounting cycle lead is a new balance sheet.

Underlying Documents.—Before beginning a discussion of the various steps in the accounting cycle, it should be noted that a business occurrence or transaction is usually marked by some form of document. These documents or memoranda are the sources of records to be described in the first step in the accounting cycle, the journalization of ordinary business transactions.

In the usual enterprise, cash receipts, cash disbursements, purchases, and sales comprise the bulk of business transactions. The underlying document for a cash receipt transaction may be a cash sales slip giving the description and amount of goods sold; it may be a duplicate receipt (the original being given to the person making the payment), either for a cash sale or a payment on account; or it may be a duplicate deposit ticket issued by the bank at the time of making a deposit. Cash disbursements may have as originating documents accounts payable vouchers, which certify a given transaction, or duplicate checks or check stubs, indicating payments made. Purchase transactions may be recorded from several originating documents: from accounts-payable vouchers, previously mentioned; from receiving department reports; or from purchase orders prepared by the purchasing department. Sales transactions may have as their source either

[1] Sprague, C. E., "The Philosophy of Accounts," p. 26, The Ronald Press Company, New York, 1920.

sales orders prepared by the salesman, duplicate invoices (which show particulars of goods sold—date, quantity, description, price, total amount, terms of sale), delivery slips, or credit memoranda.

Transactions.—The records of most ordinary business occurrences or transactions are based on business documents. The *transaction,* which has heretofore been considered as synonymous with a business occurrence, may be defined as any circumstance or set of circumstances causing a change in the status of any asset or equity. On the basis of this definition transactions may be classified in three types:

1. Those involving a relationship between the business and some outside person or entity. Cash receipts, cash disbursements, purchases, and sales are examples.
2. Those involving a change in some asset or equity due to the operation of the business or the passage of time. Depreciation, and the conversion of material, labor, and other manufacturing costs into finished goods are illustrations.
3. Those involving the transfer of some account balance to another account. They are not represented by a real business event. The transfer of individual expense and revenue accounts into the summary profit and loss account, and in turn the transfer of this balance to the net worth account or accounts are examples.

Again, transactions may be classified according to their effect on assets, liabilities, and proprietorship, the elements in the basic equation. The nine types of changes which may result from transactions are shown in the illustration on page 41.[1]

This classification is particularly significant when related to the rule for debiting and crediting accounts. It indicates the distinct combinations of transactions affecting the elements of the basic accounting equation. Furthermore it emphasizes the dual nature of the transaction: for every debit total in a given transaction there must be a corresponding credit total of like amount.

Journalizing Ordinary Business Transactions.—The first type of transaction to be considered in the accounting cycle involves a relationship between the enterprise and some outside party or

[1] To avoid confusion, it should be noted that this classification could be extended to include eighteen transactions. The following might be added

entity. With these transactions, as with any other type, there are three steps in the analysis for purposes of journalization:

1. Determining the accounts affected
2. Determining how the accounts are affected
3. Applying the rule for debiting and crediting accounts

To illustrate this analysis consider the investment of cash, $3,000, and merchandise, $6,000, by F. W. Baker. The accounts affected are as follows: cash, an asset; merchandise inventory, an asset; and F. W. Baker, capital, an item of proprietorship. Cash is increased, merchandise inventory is increased, and proprietorship is increased. The rule for debiting and crediting accounts is applied at this stage, with the result that cash is debited, merchandise inventory is debited, and F. W. Baker, capital, is credited. In general journal form the transaction is recorded as follows:

F. W. BAKER

General Journal, January, 19__

Jan. 2	Cash	3,000	
	Merchandise inventory	6,000	
	F. W. Baker, capital		9,000
	To record the initial investment of F. W. Baker		

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to the illustration on p. 41:

Assets may be decreased by

1. A decrease in proprietorship
2. A decrease in liabilities
3. An increase in other assets

Liabilities may be increased by

4. A decrease in proprietorship
5. A decrease in other liabilities
6. An increase in assets

Proprietorship may be increased by

7. An increase in other items of proprietorship
8. An increase in liabilities
9. A decrease in assets

All of the last set, however, duplicate the nine in the illustration. For example, to say that assets may be increased by an increase in proprietorship (in the illustration) is the same as saying that proprietorship may be increased by an increase of assets (in this footnote). Although only one set should be used, either, of course, may be used equally well.

Classification of Transactions According to Their Effect upon Assets, Liabilities, and Proprietorship

Type of Transaction	Example	Entry*
Assets may be increased by		
1. An increase in proprietorship	F. W. Baker, proprietor, invested $3,000 cash	Debit cash (A), $3,000 Credit F. W. Baker, capital (P), $3,000
2. An increase in liabilities	Furniture was purchased and a note of $300 was given in payment	Debit furniture and fixtures (A), $300 Credit notes payable (L), $300
3. A decrease in assets	Furniture was purchased for cash, $450	Debit furniture and fixtures (A), $450 Credit cash (A), $450
Liabilities may be decreased by		
4. An increase in proprietorship	D. J. Ford, incoming partner, personally assumed a note payable, $300	Debit notes payable (L), $300 Credit D. J. Ford, capital (P), $300
5. An increase in liabilities	A 90-day 6 per cent note payable for $400 was given to J. W. Wilson in partial settlement of his account	Debit accounts payable (L), $400 Credit notes payable (L), $400
6. A decrease in assets	A cash payment of $300 was given in settlement of J. W. Wilson's account	Debit J. W. Wilson (L), $300 Credit cash (A), $300
Proprietorship may be decreased by		
7. A decrease in proprietorship	F. W. Baker sold a one-half interest in the business to D. J. Ford for $4,350	Debit F. W. Baker, capital (P), $4,350 Credit D. J. Ford, capital (P), $4,350
8. An increase in liabilities	D. J. Ford reduced his equity by the acceptance of a note payable on the firm for $1,500	Debit D. J. Ford, capital (P), $1,500 Credit notes payable (L), $1,500
9. A decrease in assets	F. W. Baker withdrew cash amounting to $300	Debit F. W. Baker, capital (P), $300 Credit cash (A), $300

* In this column assets are abbreviated (A); liabilities (L); proprietorship (P).

In the general journal the account to be debited is always written first. Accounts to be credited follow and are indented to the right. In a given transaction all accounts to be debited are written first and all accounts to be credited, second. The explanation of the transaction is written directly beneath the last account credited, and the full width of the column is used.

Posting Journal Entries.—As explained in Chapter III, the journal contains the record of the transaction, the ledger the record of the account. The process of transferring entries from the journal to the proper accounts in the ledger is known as *posting*. The ledger account, where information from the journal is posted, appears (in skeleton form) as follows:

Name of Account (page number)

(*a*)	(*b*)	(*c*)	(*d*)	(*e*)	(*a*)	(*b*)	(*c*)	(*d*)	(*e*)

The month date is placed in column *a*, the day date in column *b*, explanations or notations in column *c*, and the amount to be debited or credited in column *c*. Column *d* is the folio column. In the ledger a figure here serves a double purpose: it indicates that the posting has been made, and it shows the page number in the journal where further information concerning the transaction may be obtained. In the journal a number in the folio column indicates that the posting has been effected, and it shows the page in the ledger to which the amount has been carried.

In the example used in the previous step, the posting process would be completed as follows:

Cash Page 1

Jan.	2		1	3,000					

Merchandise Inventory Page 2

Jan.	2		1	6,000					

F. W. Baker, Capital Page 3

					Jan.	2		1	9,000

The cash account is debited \$3,000; the merchandise inventory is debited \$6,000; and F. W. Baker, capital, is credited

$9,000, with proper accompanying notations for dates and folio numbers. In the journal the page number of the respective accounts is written in the folio column on the same line as the account titles.

Footing the Accounts.—The next step in the accounting cycle consists of footing the accounts, a process whereby the balance of each account is determined. This step is important, mainly as preliminary to the succeeding one, that of taking a trial balance. The technique may be illustrated by the following cash account used in the example given later in this chapter (page 48).

CASH — Page 1

19__						19__					
Jan.	2		1	3,000	00	Jan.	2		1	100	00
	8		2	900	00		2		1	450	00
	17		2	1,200	00		3		1	75	00
	20	*1,865.00**	2	450	00		4		1	2,000	00
				5,550	*00**		5		1	240	00
							10		2	50	00
							13		2	300	00
							22		2	300	00
							26		3	50	00
							31		3	120	00
										3,685	*00**

* Small pencil figures.

Two steps are necessary in footing accounts:

1. Total the column figures on each side of the account in small, legible pencil marks, written directly beneath the last figure in the respective column.
2. Write the difference between the two totals in the explanation column on the side having the greater total.

Taking the Trial Balance.—After the accounts are footed, those having balances are placed in a *trial balance*. This may be defined as a list of open accounts (accounts having balances) appearing in the ledger and arranged either according to total debits and total credits in each account (trial balance, page 50) or according to the balance of each account (trial balance, page 51). The first form has the advantage of indicating the volume of transactions affecting specific accounts, but the second is customarily used because the balance sheet and the profit and loss

statement may be prepared without the clerical computation required to determine the account balance. The purpose of the trial balance is twofold: to offer presumptive evidence of the clerical accuracy of the ledger, and to arrange the accounts in a convenient form for the preparation of the statements.

Once the accounts have been footed, the steps required to prepare a trial balance (by account balance) are as follows:

1. Write the open accounts on ordinary two-column journal paper in the order of their appearance in the ledger, placing each account balance in its appropriate column on the same line as the account title.
2. Draw an addition line under the last figure in the trial balance. Draw another addition line under the other column directly opposite.
3. Add both columns and write in the amounts, placing double-ruled lines beneath the totals.

In order to check the accuracy of the ledger, the trial balance is usually taken monthly, even though the statements are not prepared so often. When it is taken monthly, totals of previous months are included in the balances until the end of the fiscal period.

Sometimes the column totals of the trial balance fail to balance. The following procedure[1] is recommended for discovering errors:

1. If there is a difference of 1 cent, 10 cents, $1, etc., it is reasonable to assume first that there is an error in addition.
2. If the difference between the totals is divisible by 2, make the division and look through the trial balance for a debit account balance of this amount improperly classified as a credit amount, or vice versa.

[1] Recommended procedures for locating errors sometimes include suggestions for locating transpositions and slides in figures; these may be helpful if there is only one error. For an explanation of these special tests see MacFarland and Ayars, "Accounting Fundamentals," pp. 102–103, McGraw-Hill Book Company, Inc., New York, 1936. For an extended discussion of methods of locating errors see H. A. Finney, "Introduction to Principles of Accounting," pp. 469–476, Prentice-Hall, Inc., New York, 1938.

3. Check the amounts in the trial balance against the ledger account balances. Be sure that the closed accounts equate and that all accounts with balances have been included.
4. Check account additions and subtractions.
5. Verify the postings, working from the ledger to the journal. Place a small check mark opposite the figures compared in both the ledger and the journal. Examine these closely for figures with two marks or with none.

It should be noted that even though the trial balance totals are equal, this is only presumptive evidence of accuracy in the ledger—important errors may still be present. Errors either of omission or of commission may be made without any effect on the equilibrium of the trial balance. Errors of omission may include the failure to journalize an entire transaction, or, if journalized, to post it. Errors of commission may include mistakes made in analyzing a transaction; either wrong accounts or wrong amounts may be journalized, postings may be made to wrong accounts, or the wrong amounts may be posted. But if compensating errors are made—if the total debits in a given transaction, or a series of transactions, equal the total credits—such errors will not be disclosed by the trial balance.

To illustrate better the first three steps in the accounting cycle—the process of journalizing, posting, and taking a trial balance—a somewhat extended example is offered.

ILLUSTRATIVE PROBLEM

Assume that on January 2, 19__, F. W. Baker started business with an investment of $3,000 in cash and $6,000 in inventory. Assume further that the following transactions occur during the month:

January 2. Paid rent for January, $100.
2. Bought furniture and fixtures from W. R. Simmons, $750; paid cash, $450 and gave a 60-day 6 per cent note dated January 2 for the balance.
3. Bought office supplies for cash, $75.
4. Bought merchandise for cash, $2,000; from J. W. Wilson on account, $1,500.
5. Paid cash for insurance for the calendar year, $240.
8. Sold merchandise for cash, $900; to J. C. Steele on account, $750.
10. Paid cash for advertising space in Herald Tribune, $50.
13. F. W. Baker withdrew cash, $300.

January 14. J. C. Steele returned goods sold to him January 8 amounting to $150.

15. F. W. Baker sold one-half of his equity in the business to C. J. Ford for $4,350 cash. It was agreed that Ford would share in no portion of the profits made during the current month.

17. Sold merchandise for cash, $1,200; to V. B. Jones on account, $200.

18. Returned merchandise purchased from J. W. Wilson, $200.

20. Received cash on account from J. C. Steele, $450.

22. Paid J. W. Wilson $300 on account and gave him a 90-day 6 per cent note for $400.

26. Paid miscellaneous expenses, $50.

29. F. W. Baker reduced his equity by accepting a note of the firm of $1,500 for 1 year bearing interest at 6 per cent.

31. Paid clerical salaries, $120.

F. W. BAKER

General Journal, January, 19__

Page 1

Jan.	2	Cash	1	3,000	
		Merchandise inventory	4	6,000	
		F. W. Baker, capital	9		9,000
		To record the initial investment of F. W. Baker			
	2	Rent	18	100	
		Cash	1		100
	2	Furniture and fixtures	6	750	
		Cash	1		450
		Notes payable	8		300
		To record the purchase of furniture and fixtures from W. R. Simmons The note is for 60 days, is dated Jan. 2, and bears 6 per cent . interest			
	3	Office supplies	16	75	
		Cash	1		75
		To record the purchase of office supplies from Weldon Brothers			
	4	Purchases	13	3,500	
		Cash	1		2,000
		J. W. Wilson	7		1,500
		To record the purchase of merchandise from J. W. Wilson			
	5	Insurance premiums	5	240	
		Cash	1		240
		To record the purchase of insurance for the calender year			

Page 2

Jan. 8	Cash	1	900	
	J. C. Steele	3	750	
	Sales	11		1,650
	To record the sale of merchandise to J. C. Steele			
10	Advertising	15	50	
	Cash	1		50
	To record the purchase of advertising space in the Herald Tribune			
13	F. W. Baker, capital	9	300	
	Cash	1		300
	To record the withdrawal of cash			
14	Sales returns	12	150	
	J. C. Steele	1		150
	To record goods returned from sale of Jan. 8			
Jan. 15	F. W. Baker, capital	9	4,350	
	J. C. Ford, capital	10		4,350
	To record the sale of one-half Mr. Baker's equity to Mr. Ford. It was agreed that Mr. Ford would share in no portion of the profits made during the current month			
17	Cash	1	1,200	
	V. B. Jones	2	200	
	Sales	11		1,400
	To record the sale of merchandise to V. B. Jones			
18	J. W. Wilson	7	200	
	Purchase returns	14		200
	To record goods returned purchased Jan. 4 from J. W. Wilson			
20	Cash	1	450	
	J. C. Steele	3		450
	To record payment on account			
22	J. W. Wilson	7	700	
	Cash	1		300
	Notes payable	8		400
	The note is for 90 days, bears interest at 6 per cent, and is dated Jan. 22.			

Page 3

26	Miscellaneous expenses...........	20	50	
	Cash.........................	1		50
	Paid sundry expenses			
29	F. W. Baker, capital.............	9	1,500	
	Notes payable.................	8		1,500
	The note given to Mr. Baker is dated Jan. 29, is for one year, and bears interest at 6 per cent			
Jan. 31	Office salary....................	17	120	
	Cash.........................	1		120
	Paid clerical salaries for January			

F. W. BAKER

GENERAL LEDGER

CASH

Page 1

19__						19__					
Jan.	2		1	3,000	00	Jan.	2		1	100	00
	8		2	900	00		2		1	450	00
	17		2	1,200	00		3		1	75	00
	20	*1,865.00**	2	450	00		4		1	2,000	00
				5,550	*00**		5		1	240	00
							10		2	50	00
							13		2	300	00
							22		2	300	00
							26		3	50	00
							31		3	120	00
										3,685	*00**

V. B. JONES

Page 2

19__											
Jan.	17		2	200	00						

J. B. STEELE

Page 3

19__						19__					
Jan.	8	*150.00**	2	750	00	Jan.	14		2	150	00
							20		2	450	00
										600	*00**

MERCHANDISE INVENTORY

Page 4

19__											
Jan.	2		1	6,000	00						

* Small pencil figures.

INSURANCE PREMIUMS Page 5

19__											
Jan.	5		1	240	00						

FURNITURE AND FIXTURES Page 6

19__											
Jan.	2		1	750	00						

J. W. WILSON Page 7

19__						19__					
Jan.	18		2	200	00	Jan.	4	*600.00**	1	1,500	00
	22		2	700	00						
				900	*00**						

NOTES PAYABLE Page 8

						19__					
						Jan.	2		1	300	00
							22		2	400	00
							29		3	1,500	00
										2,200	*00**

F. W. BAKER, CAPITAL Page 9

19__						19__					
Jan.	13		2	300	00	Jan.	2	*2,850.00**	1	9,000	00
	15		2	4,350	00						
	29		3	1,500	00						
				6,150	*00**						

C. F. FORD, CAPITAL Page 10

						19__					
						Jan.	15		2	4,350	00

SALES Page 11

						19__					
						Jan.	8		2	1,650	00
							17		2	1,400	00
										3,050	*00**

SALES RETURNS AND ALLOWANCES Page 12

19__											
Jan.	14		2	150	00						

*Small pencil figures.

Purchases Page 13

19__ Jan.	4		1	3,500	00						

Purchase Returns and Allowances Page 14

						19__ Jan.	18		2	200	00

Advertising Page 15

19__ Jan.	10		2	50	00						

Office Supplies Page 16

19__ Jan.	3		1	75	00						

Office Salaries Page 17

19__ Jan.	31		3	120	00						

Rent Page 18

19__ Jan.	2		1	100	00						

Miscellaneous Expenses Page 19

19__ Jan.	26		3	50	00						

BAKER AND FORD

Trial Balance by Total Debits and Credits

January 31, 19__

Cash	$ 5,550	$ 3,685
Accounts receivable:		
V. B. Jones	200	
J. C. Steele	750	600
Merchandise inventory January 2, 19__	6,000	
Insurance premiums	240	
Furniture and fixtures	750	
J. W. Wilson	900	1,500
Notes payable		2,200
F. W. Baker, capital	6,150	9,000

Baker and Ford (*Continued*)

C. J. Ford, capital		4,350
Sales		3,050
Sales returns and allowances	150	
Purchases	3,500	
Purchase returns and allowances		200
Advertising	50	
Office supplies	75	
Office salaries	120	
Rent	100	
Miscellaneous expense	50	
	$24,585	$24,585

BAKER AND FORD

TRIAL BALANCE BY ACCOUNT BALANCES

January 31, 19__

Cash	$ 1,865	
Accounts receivable:		
V. B. Jones	200	
J. C. Steele	150	
Merchandise inventory January 2, 19__	6,000	
Insurance premiums	240	
Furniture and fixtures	750	
J. W. Wilson		$ 600
Notes payable		2,200
F. W. Baker, capital		2,850
C. J. Ford, capital		4,350
Sales		3,050
Sales returns and allowances	150	
Purchases	3,500	
Purchase returns and allowances		200
Advertising	50	
Office supplies	75	
Office salaries	120	
Rent	100	
Miscellaneous expense	50	
	$13,250	$13,250

Questions

Review.

1. What is meant by the accounting cycle?
2. Explain the importance of underlying documents in the journalization process.
3. Give a classification of transactions.
4. What three steps are necessary in the analysis of a transaction?
5. Explain the use of the folio column in the journal and in the accounts.
6. What two steps are necessary in footing accounts?

7. Outline the necessary steps in taking a trial balance.
8. Give a procedure for locating errors in the trial balance.
9. Enumerate some of the errors which the trial balance will not disclose.

Discussion.

10. Distinguish between the function of the trial balance and the function of the balance sheet.
11. What is the relation between the trial balance and
    a. The balance sheet
    b. The profit and loss statement
    c. The ledger
12. Under what conditions should a trial balance by totals of debits and credits in each account be used? Under what conditions should a trial balance by account balances be used?

Suggested Supplementary Readings

COLE, W. M.: "The Fundamentals of Accounting," Chaps. 9 and 10, Houghton Mifflin Company, Boston, 1921.

KOHLER, E. L., and P. L. MORRISON: "Principles of Accounting," Chaps. 5 and 6, McGraw-Hill Book Company, Inc., New York, 1931.

MACFARLAND, G. A., and R. D. AYARS: "Accounting Fundamentals," Chaps. 7 and 9, McGraw-Hill Book Company, Inc., New York, 1936.

MCKINSEY, J. O., and H. S. NOBLE: "Accounting Principles," Chap. 6, South-Western Publishing Company, Cincinnati, 1939.

PATON, W. A.: "Essentials of Accounting," Chap. 4, The Macmillan Company, New York, 1938.

POWELSON, J. A.: "Introductory Accounting," Chaps. 2, 3, and 4, Prentice-Hall, Inc., New York, 1926.

CHAPTER V

THE ACCOUNTING CYCLE.—(*Continued*)

In the last chapter transactions were divided into three groups. First, were those (already considered) which express a relationship between the business and some outside party or entity. Second, were those which involve a change in the value of some asset or equity due to the operation of the business or to the passage of time (the diminished value of a machine due to wear and tear, for example). Third, were those in which the balance of one account is transferred to another. For the most part transactions of the second group are recorded by means of adjusting entries, those of the third group by means of closing entries.

Adjusting Entries.—The entries required to correct the accounts to their proper values are commonly known as *adjusting entries*. On the completion of the trial balance and before the profit and loss statement and the balance sheet can be prepared, certain adjustments must be made to the ledger accounts before they will disclose financial and operating results as accurately as it is possible to state them.

For convenience of discussion, these adjustments may be classified as follows:

1. Inventories
2. Assets requiring valuation accounts
3. Accrued expenses
4. Accrued income
5. Prepaid expenses
6. Deferred income

Inventory Adjustment.—Before discussing the inventory adjustment, the distinction between the terms "merchandise inventory," "purchases," and "cost of goods sold" should be made clear. The merchandise inventory account contains the value of the asset (merchandise stock-in-trade) at the end of the

fiscal period. The purchases account is treated as an expense and includes the amount of merchandise acquired during the fiscal period. The balance of the cost of goods sold account is the cost price of the sales for the fiscal period. The relationship of the purchases and the merchandise inventory account to the cost of goods sold account is a close one. If the inventory figure has increased, it means, ordinarily, that not all the purchases made during the period were sold. Therefore, of the total amount of purchases made, part goes to the increase in the inventory, the remainder to the cost of goods sold. If, however, the cost of goods sold is greater than the purchases made during the period, this means that the cost of goods sold is made up not only of all the purchases but also of an amount equal to the decrease in inventory value.

Such is the case in the present illustration. The decrease in the inventory of $1,100 (January 1, $6,000; June 30, $4,900) means that an amount of goods equal to all purchases made during the fiscal period has entered into the cost of goods sold together with an inventory value amounting to $1,100. This may be shown as follows:[1]

June 30, 19__		
Cost of goods sold	6,000	
Merchandise inventory, Jan. 1, 19__		6,000
To close the inventory of Jan. 1, 19__		
Merchandise inventory, June 30, 19__	4,900	
Cost of goods sold		4,900
To record the inventory of June 30, 19__		

If the merchandise purchases made during the period amount to $18,950, purchase returns and allowances total $420, and transportation in is $120, these balances may be transferred to cost of goods sold by the following entries on June 30:

Cost of goods sold	18,950	
Purchases		18,950
To transfer purchases into the cost of goods sold account		

[1] An alternative procedure for recording inventory adjustments is to place the values of both inventories in a single account—in which case the balance is the last inventory value.

Purchase returns and allowances.............	420	
Cost of goods sold........................		420
To transfer purchase returns and allowances to the cost of goods sold account		
Cost of goods sold..........................	120	
Transportation in........................		120
To transfer transportation in to the cost of goods sold account		

When these adjusting entries are posted, the accounts involved will appear as follows:

MERCHANDISE INVENTORY, JANUARY 1, 19__

19__			19__		
Jan. 1	Balance	6,000	June 30		6,000

MERCHANDISE INVENTORY, JUNE 30, 19__

19__					
June 30	Balance	4,900			

PURCHASES

19__			19__		
June 30	Total	18,830	June 30		18,830

PURCHASE RETURNS AND ALLOWANCES

19__			19__		
June 30		420	June 30	Total	420

TRANSPORTATION IN

19__			19__		
June 30		120	June 30		120

COST OF GOODS SOLD

19__			19__		
June 30		6,000	June 30		4,900
		18,830			420
		120			

As in the case of merchandise, the important consideration of supplies inventory is to distinguish between the expense and the

asset elements. If, for example, the supplies account balance is $125 and the amount remaining is $40, then the latter amount is the asset portion and the supplies expense for the period is $85. The entry to adjust these values is as follows:

	June 30, 19__		
	Supplies expense	85	
	Supplies		85

Assets Requiring Valuation Accounts.—Although inventories do occasionally have valuation accounts, these are used for the most part with accounts receivable and fixed assets. The purpose of an asset valuation account is to show the decline in the value of the asset to which the valuation account refers. The decrease, instead of being recorded directly in the asset account, is placed in a special account. To determine the book value of an asset having a valuation account, the amount appearing in the asset account proper must be considered jointly with the valuation account balance.

It is most unlikely that all accounts outstanding at the close of the fiscal period will be collected. Recognition of the probable loss from doubtful accounts must, of course, be taken before the loss actually occurs; to do otherwise would result in a later fiscal period being burdened with an expense which does not properly belong to it. The period in which the sale originated should bear the cost incurred in securing the revenue for that period. Hence an estimate is made of the doubtful accounts and recorded as follows:

	June 30, 19__		
	Bad debts	95	
	Reserve for doubtful accounts		95
	To record the estimated losses on outstanding accounts receivable		

The balance of accounts receivable (assumed) and the effect of the adjusting entry on the accounts involved may be shown as follows:

Accounts Receivable

19__			
June 30 Balance	3,200		

RESERVE FOR DOUBTFUL ACCOUNTS

		19__ June 30	95

BAD DEBTS

19__ June 30	95		

In general, the same principle is applied in making the adjustment for depreciation. In the illustration used, the depreciation on furniture and fixtures for the six -month period is $125. This is recorded in the journal as follows:

June 30, 19__		
Depreciation....................................	125	
Reserve for depreciation on furniture and fixtures		125

The balance of furniture and fixtures (assumed) and the data contained in the adjusting entry will appear in ledger form as follows:

FURNITURE AND FIXTURES

19__ June 30	1,500		

RESERVE FOR DEPRECIATION OF FURNITURE AND FIXTURES

		19__ June 30	125

DEPRECIATION OF FURNITURE AND FIXTURES

19__ June 30	125		

The depreciation charge is an expense; the reserve for depreciation is a valuation account to be deducted from the asset to which it refers before the book value of the asset can be determined.

The Cash Basis and the Accrual Basis of Accounting.—Books are kept either on the cash or on the accrual basis. While the distinction between the two cannot be sharply defined in view of the current usage of the term "cash basis," revenue on the cash basis is usually considered as realized only when cash has been received, and expenses are considered applicable to the period in

question only when they have been paid. The accrual basis has been explained as consisting of "the effort to recognize in a given period all revenues which can fairly be said—on the basis of valid business and legal rules—to have been earned in the period, and to charge thereto as expenses all the costs attaching to such revenues."[1] While a strict observation of the cash basis would undoubtedly simplify the accounting process, for practical business purposes it is wholly inadequate.[2]

Accrued Expenses.—An *accrued expense* item is an addition to the expenses of the accounting period about to be closed and a liability owing, but not yet due. If, for example, unpaid salaries at the close of the fiscal period amounted to $50, the adjusting entry to record it would be

June 30, 19__		
Salaries	50	
Accrued salaries payable		50

When the entry is posted, the ledger accounts will appear as follows:

SALARIES

19__			
June 30 Balance	850		
30	50		

ACCRUED SALARIES PAYABLE

		19__	
		June 30	50

[1] Paton, W. A., ed., "Accountants' Handbook," p. 1083, The Ronald Press Company, New York, 1933.

[2] DR Scott explains the inadequacy of the cash basis as follows: "If incomes are received in a period earlier than corresponding expenses are paid the effect of handling them on a cash basis will be to increase the net income of the earlier period and to decrease that of the later period. One period might show a net gain and the other a net loss when as a matter of fact the operations of the two periods were the same except for the dates of cash receipts and payments. The inadequacy and impropriety of such a method is particularly evident in corporate business where directors as well as stockholders are so largely dependent upon accounting records for their judgment of the profitableness or unprofitableness of periodic operations." *Ibid.*, p. 1083.

Accrued Income.—*Accrued income* is an addition to revenue since the income has been earned within the period about to be closed. At the same time it is an asset, a receivable not yet due or collectible. For example, if the interest accrued, but not due, on the notes receivable held by Baker and Ford amounts to $5, this information will be journalized as follows:

June 30, 19__		
Accrued interest receivable	5	
Interest earned		5

When this entry is posted, the ledger accounts will appear as follows:

INTEREST EARNED

		19__		
		June 30	Balance	20
		30	(adjustment)	5

ACCRUED INTEREST RECEIVABLE

19__				
June 30	(adjustment)	5		

Prepaid Expenses.—Prepaid expenses, the fifth type of adjustment under consideration, offers an illustration of the relation between assets and expenses. A *prepaid expense* is a claim of the business for services to be rendered and, as such, is an asset. As the services are rendered, the claim for future benefits is correspondingly reduced and the asset becomes an expense. An expense may be defined, in terms of an asset, as an expired asset value.

If, for example, advertising expense amounts to $250 and of this $35 represents the value of the unexpired portion,[1] the adjusting entry necessary to record this will be as follows:

June 30, 19__		
Prepaid advertising	35	
Advertising		35

[1] The process of adjusting accounts at the close of the fiscal period is largely a question of resolving mixed accounts into their respective elements. A *mixed account* contains two or more distinct elements of asset, liability, net worth, revenue, or expense items. In the present example, the advertising account is predominately an expense. Prior to adjusting the account, however, it is mixed because it contains both expense and asset elements.

When this entry is posted, the respective ledger accounts affected will appear as follows:

ADVERTISING

19__			19__		
June 30	Balance	250	June 30	(adjustment)	35

PREPAID ADVERTISING

19__					
June 30	(adjustment)	35			

Deferred Income.—The last adjustment to be discussed is *deferred income,* which refers to revenue recorded on the books which has not yet been earned and hence must be passed on to the period which can properly claim it. This adjustment is at once a liability and a deduction from revenue. The liability is not to be construed as one to be settled by a payment in money but rather as an obligation to be satisfied by rendering a service. For example, the rent paid in advance by the tenant for the use of a garage is a liability of the enterprise in the sense that the business owes a service (specifically, the use of the garage for the ensuing month). The entry necessary to show this is

June 30, 19__

Rent income	15	
Deferred rent payable		15

When the entry is posted, the ledger accounts will appear as follows:

RENT INCOME

19__			19__		
June 30	(adjustment)	15	June 30	Balance	75

DEFERRED RENT PAYABLE

			19__		
			June 30	(adjustment)	15

Closing Entries.—With very few exceptions all adjustments are recorded before closing entries are made.[1] *Closing entries*

[1] Taxes and bonuses based on net income are exceptions.

deal with individual expense and revenue accounts, the profit and loss account, and accounts of the owners. The temporary proprietorship accounts (expense and revenue) have two important characteristics. First, their life span is temporary; it is limited to a fiscal period. Second, the accounts are closely related to the proprietor's equity; they explain the changes due to business operations. The function of the closing entries is to summarize the expense and revenue accounts and to show the net effect of operations upon proprietorship.

To facilitate this process, a summary account called profit and loss is opened. Into this all expense and all revenue account balances are transferred. The balance of the profit and loss account, in turn, is carried to proprietorship. These facts may be summarized as follows:

Profit and Loss Account

(Debit)	(Credit)
Individual expense account balances are closed into profit and loss by debiting the summary account and by crediting the respective expense accounts	Individual revenue account balances are closed into profit and loss by crediting the summary account and by debiting the respective revenue accounts
If the business has operated at a profit, this amount is transferred to proprietorship by debiting profit and loss and crediting the proprietorship account	If the business has operated at a loss, this amount is transferred to proprietorship by crediting profit and loss and debiting the proprietorship account

Readjusting Entries.—The closing entries clear the balances of all profit and loss accounts. Asset and liability accounts, however, which were placed in the ledger because of the various adjustments still remain on the books. Since these balances are significant only at the close of the fiscal period, they are removed on the first day of the new accounting period. This is accomplished by reversing the adjusting entry. A *readjusting* (or reversing) entry transfers an item, which has been adjusted, from an asset or liability account to an expense or revenue account.

For example, since the account accrued salaries payable (page 58) is significant only because it appears in the balance sheet at the close of the fiscal period, the amount is removed when it is

no longer of any use. Hence on July 1 the following readjusting entry is made:

Accrued salaries payable	50	
Salaries		50

As a result of this entry the liability account is cleared and the expense account reduced. Thus, when salaries are paid on July 3, the recording entry will be

Salaries	100	
Cash		100

After the reversing entry has been made and the payroll recorded, the salary account shows the amount of expense applicable to the fiscal period beginning July 1. The accounts appear as follows:

SALARIES

19—				19—			
June	30	Balance	850	June	30	To profit and loss	900
	30	(adjustment)	50				
			900				900
July	3		100	July	1		50

ACCRUED SALARIES PAYABLE

19—				19—			
July	1	(readjusting entry)	50	June	30	(adjustment)	50

The asset, accrued interest receivable, is removed from the books by the following entry:

Interest earned	5	
Accrued interest receivable		5

When the entry is posted, the accounts appear as follows:

INTEREST EARNED

19—				19—			
June	30	To profit and loss	15	June	30	(adjustment)	5
					30	Balance	10
			15				15
July	1	(readjusting entry)	5				

Accrued Interest Receivable

19__			19__		
June 30	(adjustment)	5	July 1	(readjusting entry)	5

Similarly, the prepaid advertising account will be closed by the following readjusting entry:

Advertising	35	
Prepaid advertising		35

After the readjusting entry has been posted, the accounts affected appear as follows:

Advertising

19__			19__		
June 30	Balance	250	June 30	(adjustment)	35
			30	To profit and loss	215
		250			250
July 1	(readjusting entry)	35			

Prepaid Advertising

19__			19__		
July 1	(adjustment)	35	June 30	(readjusting entry)	35

Deferred rent payable, the last of the adjustments considered in this chapter, is closed by the following entry:

Deferred rent payable	15	
Rent income		15

After posting, the accounts will appear as follows:

Rent Income

19__			19__		
June 30	(adjustment)	15	June 30	Balance	75
	To profit and loss	60			
		75			75
			July 1	(readjusting entry)	15

Deferred Rent Payable

19__			19__		
July 1	(readjusting entry)	15	June 30	(adjustment)	15

To better summarize the content of this chapter the trial balance and a list of adjustments of Baker and Ford are given as of June 30, 19__. From these data the adjusting, closing, and readjusting entries are recorded as they appear in the general journal.

BAKER AND FORD

TRIAL BALANCE, JUNE 30, 19__

Cash	$ 2,250	
Accounts receivable	3,200	
Notes receivable	400	
Merchandise inventory, January 1, 19__	6,000	
Insurance premiums	240	
Furniture and fixtures	1,500	
Office supplies	125	
Accounts payable		$ 1,450
Notes payable		2,000
F. W. Baker, capital		3,000
C. J. Ford, capital		4,500
Sales		23,385
Sales returns and allowances	225	
Interest earned		10
Rent income		75
Purchases	18,830	
Purchase returns and allowances		420
Transportation in	120	
Advertising	250	
Salesman's salaries	550	
Office salaries	300	
Rent	700	
Interest expense	25	
Miscellaneous expense	125	
	$34,840	$34,840

Additional data:

(1)	Merchandise inventory, June 30, 19__	$4,900
(2)	Office supplies on hand	40
(3)	Estimated loss on outstanding accounts receivable	95
(4)	Depreciation on furniture and fixtures	125
(5)	Office salaries accrued	50
(6)	Accrued interest on notes receivable	5
(7)	Prepaid advertising	35
(8)	Rent income deferred	15
(9)	Unexpired insurance	120
(10)	Prepaid interest on notes payable	10
(11)	Rent paid in advance	100

BAKER AND FORD

Adjusting and Closing Entries

June 30, 19__

	(1)		
June 30	Cost of goods sold, January 1, 19__........	6,000.00	
	Merchandise inventory.		6,000.00
	To close the merchandise inventory of January 1, 19__ into the cost of goods sold		
	(2)		
	Merchandise inventory, June 30, 19__.....	4,900.00	
	Cost of goods sold.....................		4,900.00
	To record the inventory of June 30, 19__		
	(3)		
	Cost of goods sold.......................	18,830.00	
	Purchases............................		18,830.00
	To transfer purchases to the cost of goods sold account		
	(4)		
	Purchase returns and allowances.	420.00	
	Cost of goods sold.....................		420.00
	To transfer purchase returns and allowances to the cost of goods sold account		
	(5)		
	Cost of goods sold.......................	120.00	
	Transportation in...........		120.00
	To transfer transportation in to the cost of goods sold account		
	(6)		
	Office supplies expense..................	85.00	
	Office supplies.......................		85.00
	To record the supplies on hand and to correctly state the supplies expense for the fiscal period		
	(7)		
	Bad debts..............................	95.00	
	Reserve for doubtful accounts..........		95.00
	To record the estimated losses on outstanding accounts receivable		
	(8)		
	Depreciation on furniture and fixtures.....	125.00	
	Reserve for depreciation on furniture and fixtures..........................		125.00
	To record the depreciation on furniture and fixtures from January 1 to June 30, 19__		
	(9)		
	Salaries................................	50.00	
	Accrued salaries payable...............		50.00
	To record unpaid salaries		

	(10)		
June 30	Accrued interest receivable	5.00	
	Interest earned		5.00
	To record the interest earned but not due on notes receivable		
	(11)		
	Prepaid advertising	35.00	
	Advertising		35.00
	To record advertising expense deferred to the next fiscal period		
	(12)		
	Rent income	15.00	
	Deferred rent payable		15.00
	To adjust the rent income paid in advance for the use of the garage		
	(13)		
	Insurance	120.00	
	Insurance premiums		120.00
	To record the insurance expense for the period		
	(14)		
	Prepaid interest	10.00	
	Interest		10.00
	To record prepaid interest on notes payable		
	(15)		
	Prepaid rent	100.00	
	Rent		100.00
	To record rent paid in advance		
	(16)		
	Sales	23,385.00	
	Interest earned	15.00	
	Rent income	60.00	
	Profit and loss		23,460.00
	To close the income accounts into the profit and loss account		
	(17)		
	Profit and loss	22,135.00	
	Sales returns and allowances		225.00
	Cost of goods sold		19,630.00
	Advertising		215.00
	Sales salaries		600.00
	Office salaries		300.00
	Rent		600.00
	Interest expense		15.00
	Miscellaneous expense		125.00
	Bad debts		95.00
	Insurance		120.00
	Office supplies expense		85.00
	Depreciation		125.00

June 30	To close the expense accounts and the deduction from income accounts into profit and loss		
	(18)		
	Profit and loss	1,325.00	
	F. W. Baker, drawing		662.50
	C. J. Ford, drawing		662.50
	To distribute the profits from operations for the 6 months ending June 30, 19__, into the drawing accounts of the partners		
	(19)		
	F. W. Baker, drawing	662.50	
	C. J. Ford, drawing	662.50	
	F. W. Baker, capital		662.50
	C. J. Ford, capital		662.50
	To close the balances of the partners' drawing accounts into their capital accounts		

BAKER AND FORD

READJUSTING ENTRIES, JULY 1, 19__

(1)		
Accrued salaries payable	50.00	
Salaries		50.00
To reverse the adjusting entry of June 30		
(2)		
Interest earned	5.00	
Accrued interest receivable		5.00
To reverse the adjusting entry of June 30		
(3)		
Advertising	35.00	
Prepaid advertising		35.00
To reverse the adjusting entry of June 30		
(4)		
Deferred rent payable	15.00	
Rent income		15.00
To reverse the adjusting entry of June 30		
(5)		
Interest expense	10.00	
Prepaid interest		10.00
To reverse the adjusting entry of June 30		
(6)		
Rent	100.00	
Prepaid rent		100.00
To reverse the adjusting entry of June 30		

Questions

Review.

1. Why are adjusting entries necessary? Distinguish between the function of adjusting and closing entries.

2. Give a classification of adjustments.
3. Explain the relationship between merchandise inventory, purchases, and cost of goods sold.
4. What is the purpose of a valuation account? Explain the relation between the valuation account and the asset account to which it refers.
5. Distinguish between the cash and the accrual basis of keeping books.
6. Identify each of the following as asset, liability, expense, or revenue items:

   a. Accrued expense
   b. Accrued income
   c. Prepaid expense
   d. Deferred income

7. Discuss the relation between assets and expenses.
8. Distinguish between the function of the profit and loss account and the profit and loss statement.
9. What is the purpose of readjusting entries?
10. Explain how one can determine the asset or liability element when expense or revenue accounts are used as mixed accounts.
11. Explain the effect of a failure to include the following adjustments on the financial status, as shown by the balance sheet, and on operations, as shown by the profit and loss statement:

   a. Wages owed workers but not yet payable to them
   b. Interest earned on notes receivable but not yet due for payment
   c. Prepaid advertising which has not been used in the present period but which will be used in the succeeding period
   d. Interest on notes receivable which has been paid in advance but which will be earned in the next fiscal period
   e. An increase in the value of merchandise inventory
   f. Depreciation on machinery
   g. Estimated bad debts on outstanding accounts receivable

Discussion.

12. On October 1 an annual premium of $240 was paid on a 1-year property insurance policy. Should this amount be charged to the asset account insurance premiums or to the expense account insurance expense? If the amount is charged to the asset account, what would be the adjusting entry at the close of the fiscal period? If charged to the expense account?
13. "Why bother with adjustments anyway? Year in and year out they are about the same in my business. Any error caused through a failure to consider them at the close of a given fiscal period will be just about offset by the failure to include them in the succeeding period." Evaluate this statement.

Suggested Supplementary Readings

BOLON, D. S.: "Introduction to Accounting," Chaps. 13, 14, and 15, John Wiley & Sons, Inc., New York, 1938.

FINNEY, H. A.: "Introduction to Principles of Accounting," Chaps. 10 and 11, Prentice-Hall, Inc., New York, 1938.

HUSBAND, G. R., and O. E. THOMAS: "Principles of Accounting," Chaps. 9 and 11, Houghton Mifflin Company, Boston, 1935.

MACFARLAND, G. A. and R. D. AYARS: "Accounting Fundamentals," Chaps. 11 and 12, McGraw-Hill Book Company, Inc., New York, 1936.

STREIGHTOFF, F. H.: "Elementary Accounting," Chaps. 7 and 8, Harper & Brothers, New York, 1928.

CHAPTER VI

THE ACCOUNTING CYCLE.—(*Concluded*)

The various operations in the accounting cycle described in the two preceding chapters are of secondary importance to management in comparison with the summarization of records in the form of statements. The greatest service accounting can render to management is to present significant, timely information relating to operations and finances in a clearly understandable manner.

The Work Sheet.—At the close of the fiscal period it is important to management that the profit and loss statement, the balance sheet, and the statement of change in net worth be prepared as quickly as possible. This can be greatly facilitated through the use of the work sheet. The *work sheet* is a summarizing device designed to facilitate the adjusting and closing process. It contains the trial balance and data essential to the adjusting and closing entries and to the preparation of the statements.

It permits the rapid compilation of reports since proper analysis and classification can be made and the statements prepared directly from the work sheet. It is prepared before the adjustments are made and the books are closed. Journalization and posting can await the completion of the statements. The work sheet is not a part of the regular accounting records or statements but rather a device which may be used whenever it is necessary to summarize quickly the adjusting and closing process and obtain classified data for the preparation of statements.

Furthermore the work sheet is an effective device for the prevention and detection of clerical errors in the adjusting and closing process because, when completed, it provides a check on clerical accuracy and on the classification of all adjustments. The accompanying 10-column work sheet (see page 72) is frequently used because of its completeness and because of the ease it affords in avoiding or checking clerical errors. Other forms, however, having both more and less columns are used as circumstances warrant.

The steps required in the preparation of the 10-column work sheet may be outlined as follows:

1. The first section contains the unadjusted trial balance. Even if the trial balance is copied, the addition of each column should be checked so that no errors of transcribing are present.
2. In the second section, headed "adjustments," the adjusting entries are entered on the appropriate line opposite the account affected. At the upper left of the amount a circled letter or number is written to identify the entry. Thus in the first entry the number appears at the upper left of the debit amount, and the same number appears at the upper left of the credit amount. As in the general journal, each entry is self-balancing. If, when added, the totals of the adjustment columns fail to equate, the error may be due to the fact that the debit part of an entry is not equal to the credit part, or it may be due to an error in addition. By numbering each entry it is a simple matter to trace its failure to balance. Furthermore, when the entries are journalized, it is easier to trace debit and credit amounts than it would be without this means of identification.
3. In the third section, headed "adjusted trial balance," original balances in the unadjusted trial balance are combined with the adjustments and extended in the appropriate columns of the adjusted trial balance. If, for example, a given account in the unadjusted trial balance has a debit balance and an amount appears opposite the debit column of the adjustment section, the figures are added and extended into the adjusted trial balance debit column. If, however, the amount in the adjustment column is a credit balance, it will, of course, be deducted from the balance in the unadjusted trial balance and the difference extended in the adjusted trial balance. This naturally assumes that the amount in the adjustment column is less than that in the unadjusted trial balance. A failure of the two columns to balance may be attributable to two causes: an error in the process of extension, combining data in the unadjusted trial balance and the adjustments; or an error in the addition of columns.

BAKER AND FORD
WORK SHEET, June 30, 19__

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Profit and Loss		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	2,250				2,250				2,250	
Accounts receivable	3,200				3,200				3,200	
Notes receivable	400				400				400	
Merchandise inventory Jan. 1, 19__	6,000			(1) 6,000						
Prepaid insurance	240			(13) 120	120				120	
Office furniture and fixtures	1,500				1,500				1,500	
Office supplies	125			(6) 85	40				40	
Accounts payable		1,450				1,450				1,450
Notes payable		2,000				2,000				2,000
F. W. Baker, capital		3,000				3,000				3,000
C. J. Ford, capital		4,500				4,500				4,500
Sales		23,385				23,385		23,385		
Sales returns and allowances	225				225		225			
Interest earned		10		(10) 5		15		15		
Rent income		75	(12) 15			60		60		
Purchases	18,830			(3) 18,830						
Purchase returns and allowances		420	(4) 420							
Transportation in	120			(5) 120						
Advertising	250			(11) 35	215		215			
Salesmen's salaries	550		(9) 50		600		600			
Office salaries	300				300		300			
Rent	700			(15) 100	600		600			
Interest expense	25			(14) 10	15		15			
Miscellaneous expense	125				125		125			
	34,840	34,840								

Cost of goods sold			(1) 6,000	(4) 420						
			(3) 18,830							
			(5) 120	(2) 4,900	19,630		19,630			
Merchandise inventory June 30, 19__			(2) 4,900		4,900				4,900	
Insurance expense			(13) 120		120		120			
Office supplies expense			(6) 85		85		85			
Accrued interest receivable			(10) 5		5				5	
Prepaid interest			(14) 10		10				10	
Prepaid rent			(15) 100		100				100	
Depreciation			(8) 125		125		125			
Reserve for depreciation—furniture and fixtures				(8) 125		125				125
Bad debts			(7) 95		95		95			
Reserve for doubtful accounts				(7) 95		95				95
Prepaid advertising			(11) 35		35				35	
Deferred rent income				(12) 15		15				15
Accrued salesmen's salaries payable				(9) 50		50				50
			30,910	30,910	34,695	34,695				
Net profit							1,325			1,325
							23,460	23,460	12,560	12,560

4. The fourth and fifth sections contain extensions of balances in the adjusted trial balance into the appropriate profit and loss or balance sheet columns. Expense and deductions from revenue accounts appear on the debit side of the column headed "profit and loss"; revenue and deductions from expense accounts appear in the credit column of the same section. Assets and deductions from liability or net worth accounts are extended to the debit column of the balance sheet section; liability, net worth, and deductions from asset accounts are extended to the credit column of the balance sheet section.
5. Write the balancing figure in the profit and loss columns and in the balance sheet columns. If extensions and additions have been made correctly, these two figures will be the same. If a profit has been made, the excess of revenue over expenses will require a balancing figure in the expense column and the increase in proprietorship (due to the profit) will appear in the credit column in the balance sheet section.[1]

Preparation of the Profit and Loss Statement.—Two forms of the profit and loss statement are frequently used, the report (page 75) and the account (page 76).

In general the statement should be condensed sufficiently to appear on a single sheet. Whether a detailed form or a condensed form is used depends upon the purpose it is to serve. In either case the important facts should be disclosed to the reader. It should be noted that it is as easy to obstruct the presentation of essential data or relationships by showing too much detail as

[1] The reason for the difference in totals in the profit and loss columns is because the changes in proprietorship, due to business operations, are recorded in temporary proprietorship accounts, and the excess of the revenue accounts over the expense accounts is the profit for the fiscal period. At first glance the reason for this difference in the balance sheet columns may not be so clear. Changes in financial structure due to business operations are always recorded directly in the asset and liability accounts affected. These transactions, however, are not recorded directly in the capital accounts. Instead, they are entered in expense and revenue accounts, and through the closing process the profit or loss is transferred to the capital accounts. Hence in the balance sheet section, if a profit has been made (the same as an increase in capital in this case), the figure is added to the credit column.

it is by condensing the statement to the point of showing too little. In either event the statement that fails to disclose essential information or relationships can scarcely be considered satisfactory.

Certain details should be carefully observed. The heading should state clearly the name of the business, the title, and the

BAKER AND FORD

REPORT FORM OF THE PROFIT AND LOSS STATEMENT

For the 6 Months Ending June 30, 19__

Gross sales		$23,385	
Less sales returns and allowances		225	
Net sales			$23,160
Cost of goods sold:			
Merchandise inventory, January 1, 19__		$ 6,000	
Purchases	$18,830		
Plus transportation in	120		
	$18,950		
Less purchase returns and allowances	420	18,530	
Goods available for sale		$24,530	
Less merchandise inventory, June 30, 19__		4,900	
Cost of goods sold			19,630
Gross profit on sales			$ 3,530
Less selling expenses:			
Advertising	$ 215		
Sales salaries	600		
Total selling expenses		$ 815	
Less general administrative expenses:			
Office salaries	$ 300		
Rent	600		
Insurance expense	120		
Office supplies expense	85		
Depreciation	125		
Bad debts	95		
Miscellaneous expense	125		
Total general administrative expense		1,450	2,265
Net profit from operations			$ 1,265
Nonoperating income:			
Interest earned	$ 15		
Rent income	60		
Total		$ 75	
Nonoperating expenses:			
Interest expense		15	60
Net profit for the period			$ 1,325

period of time covered. The use of the amount columns, subtotals, totals, and marginal indentations should be carefully noted.

The manner in which revenue and expenses are arranged in the operating statements depends to a large degree upon the internal organization of the enterprise. Classification should follow a pattern which will permit allocation of responsibility within the organization. While the arrangement to be followed depends upon the individual business requirements, the following features are usually emphasized:

1. Gross sales
2. Net sales
3. Cost of goods sold
4. Gross margin or gross profit
5. Selling and administrative expenses
6. Net profit from operations
7. Nonoperating income and nonoperating expenses
8. Net profit

BAKER AND FORD

ACCOUNT FORM OF THE PROFIT AND LOSS STATEMENT

For the 6 Months Ending June 30, 19__

Expense		Revenue	
Cost of goods sold	$19,630	Net sales	$23,160
Advertising	215	Interest income	15
Salaries	900	Rent income	60
Rent	600		
Miscellaneous expense	125		
Insurance expense	120		
Office supplies expense	85		
Depreciation	125		
Bad debts	95		
Interest expense	15		
Total expense	$21,910		
Net profit	1,325		
	$23,235		$23,235

Preparing the Statement of Change in Net Worth.—The statement of change in net worth should include the following items:

1. A suitable title including the name of the enterprise, the name of the statement, and the period covered

2. The balance of net worth at the beginning of the period
3. Profits earned
4. Additional investments
5. Withdrawals of capital
6. Net worth at the end of the period

If the business is a sole proprietorship, the single capital account balance is shown in the statement; if it is a partnership, the capital accounts of the owners may be arranged as shown in statement of change in net worth on this page; if it is a corporation, the proprietorship equity is represented by capital stock and surplus, due consideration being given to stock discount and stock premium (see Chapter XI).

BAKER AND FORD

STATEMENT OF CHANGE IN NET WORTH

For the 6 Months Ending June 30, 19__

	Baker	Ford	Total
Net worth balance, January 1, 19__	$9,000.00		$ 9,000.00
Additional investments		$4,500.00	4,500.00
Profit	662.50	662.50	1,325.00
Total	$9,662.50	$5,162.50	$14,825 00
Withdrawals	6,000.00		6,000 00
Net worth balance, June 30, 19__	$3,662.50	$5,162.50	$8,825.00

Preparation of the Balance Sheet.—Like the profit and loss statements, balance sheets are prepared in either the report or the account form (pages 79 and 80). In general the same principles of construction apply to the balance sheet as apply to the profit and loss statement. The statement should be condensed sufficiently to appear on a single sheet—if necessary, considerable detail can be relegated to supporting schedules (page 81). The heading should state clearly the name of the business, the title, and the date on which the statement is drawn. Care should be taken that the proper forms for group headings, columns, subtotals, and marginal indentations are used.

While the manner of grouping the items in the balance sheet depends on the nature of the business and the purpose of the statement, the following suggestions are general enough to apply in most cases:

1. Assets should be arranged in logical sequence. What constitutes logical sequence depends upon the intended use. If the balance sheet is being prepared for an investor interested primarily in the fixed assets, the sequence should be from fixed to current assets. If, however, the statement is being prepared for a banker interested in the current condition of a business, current assets should ordinarily be listed first on the asset side and current liabilities first on the liability side. This arrangement enables the reader to quickly contrast the two groups and to form an opinion of the solvency of the enterprise. If this sequence is followed, the usual order of asset groupings is as follows:

   a. Current assets
   b. Fixed assets
   c. Deferred charges

   Frequently, a fourth group is added. Special funds in hands of trustee, and investments may be cited as examples which belong to this group and which do not fit into the threefold classification given.
2. Liabilities should be arranged in a sequence to conform with the arrangement of assets. If current assets appear first on the asset side, current liabilities should appear first on the liability side.
3. Proprietorship items should appear as a group under an appropriate caption.
4. Asset, liability, and proprietorship items should be stated at their gross amounts, with deductions shown. Examples of such deductions are reserve for doubtful accounts, reserve for outstanding purchase discounts, and discount on capital stock.

BAKER AND FORD

Report Form of the Balance Sheet

June 30, 19__

Assets

Current Assets:				
Cash		$ 2,250.00		
Accounts receivable	$3,200.00			
Less reserve for doubtful accounts	95 00	3,105.00		
Notes receivable		400 00		
Accrued interest receivable		5.00		
Merchandise inventory, June 30, 19__		4,900.00		
Prepaid expenses:				
Prepaid insurance	$ 120.00			
Office supplies	40.00			
Prepaid interest	10 00			
Prepaid rent	100 00			
Prepaid advertising	35.00			
Total prepaid expenses		305.00		
Total current assets			$10,965.00	
Fixed Assets:				
Furniture and fixtures		$1,500 00		
Less reserve for depreciation		125 00	1,375 00	
Total assets				$12,340.00

Liabilities

Current Liabilities:			
Accounts payable	$ 1,450 00		
Accrued salaries payable	50 00		
Notes payable	2,000 00		
Total current liabilities		$3,500.00	
Deferred Credits:			
Deferred rent income		15 00	
Total liabilities			3,515.00

Net Worth

F. W. Baker, capital	$3,662.50	
C. J. Ford, capital	5,162.50	
Total net worth		$ 8,825.00

BAKER AND FORD

ACCOUNT FORM OF THE BALANCE SHEET

June 30, 19__

Assets

Current Assets:			
Cash		$2,250.00	
Accounts receivable	$3,200.00		
Less reserve for doubtful accounts	95 00	3,105.00	
Notes receivable		400.00	
Accrued interest receivable		5.00	
Merchandise inventory, June 30, 19__		4,900.00	
Prepaid expenses:			
See Schedule 1		305.00	
Total current assets			$10,965.00
Fixed Assets:			
Furniture and fixtures		1,500 00	
Less reserve for depreciation		125.00	1,375.00
Total assets			$12,340.00

Liabilities

Current Liabilities:			
Accounts payable	$1,450.00		
Accrued salaries payable	50.00		
Notes payable	2,000.00		
Total current liabilities		$3,500.00	
Deferred Credits:			
Deferred rent income		15.00	
Total liabilities			$3,515.00

Net Worth

F. W. Baker, capital		$3,662.50	
C. J. Ford, capital		5,162.50	
Total net worth			$8,825.00
Total liabilities and net worth			$12,340.00

BAKER AND FORD

SCHEDULE 1, PREPAID EXPENSES

June 30, 19__

Insurance	$120
Office supplies	40
Interest	10
Rent	100
Advertising	35
Total	$305

Closing the Books.—After the profit and loss statement, the statement of change in net worth, and the balance sheet are prepared, entries are made in the journal and in the ledger to bring the books into conformity with the statements. The steps necessary to accomplish this are as follows:

1. Journalize and post the closing entries (see Chapter V).
2. Rule and balance the expense and revenue accounts.
3. Prepare a post-closing trial balance.

As already mentioned, closing entries are concerned with the transfer of expense and revenue accounts to the summary account profit and loss. The balance of this, in turn, is transferred to proprietorship.

At the close of the fiscal period the temporary proprietorship accounts must be ruled and balanced, and accounts appearing in the balance sheet usually are ruled and balanced. The following example illustrates how an account is closed and its balance carried forward.

CASH

19__						19__					
Jan.	2		1	3,000	00	Jan.	2		1	100	00
	8		2	900	00		2		1	450	00
	17		2	1,200	00		3		1	75	00
	20		2	450	00		4		1	2,000	00
							5		1	240	00
							10		2	50	00
							13		2	300	00
							22		2	300	00
							26		3	50	00
							31		3	120	00
							31	Balance		1,865	00
				5,550	00					5,550	00
Jan.	31	Balance		1,865	00						

The steps required to close an account are as follows:

1. Add both amount columns.
2. Add to the column having the smaller total an amount which will make it equal to the other column.
3. Draw a single line under the last figure in the column having the greatest number of figures. This line separates the individual items from the column totals.
4. Draw another single line under the account column having the lesser number of figures and directly opposite the first single line drawn.
5. Write the totals directly beneath the single lines drawn.
6. Draw double lines beneath the totals.
7. If the balance of the account is carried forward, it appears directly beneath the double-ruled lines.

After the accounts are ruled and balanced, a final test of the equality of debits and credits in the ledger is made. This is the function of the post-closing trial balance.

BAKER AND FORD

Post-closing Trial Balance

June 30, 19__

Cash	$ 2,250.00	
Accounts receivable	3,200.00	
Reserve for doubtful accounts		$ 95.00
Notes receivable	400.00	
Accrued interest receivable	5.00	
Merchandise inventory	4,900.00	
Prepaid insurance	120.00	
Office supplies	40.00	
Deferred interest payable	10.00	
Deferred rent expense	100.00	
Deferred advertising expense	35.00	
Furniture and fixtures	1,500.00	
Reserve for depreciation of furniture and fixtures		125.00
Accounts payable		1,450.00
Accrued salaries payable		50.00
Notes payable		2,000.00
Deferred rent income		15.00
F. W. Baker, capital		3,662.50
C. J. Ford, capital		5,162.50
	$12,560.00	$12,560.00

Since all the temporary proprietorship accounts have been closed, only the balance sheet accounts will appear in the final ledger summary. Thus the distinction between the balance sheet and the post-closing trial balance is one of form, not of content. The post-closing trial balance appears in the accompanying form.

Summary of the Steps in the Accounting Cycle.—An outline of the operations discussed in the last three chapters may be made as follows:

1. Journalization of ordinary business transactions
2. Posting journal entries
3. Footing the accounts
4. Taking a trial balance
5. Determining the adjusting transactions
6. Preparing a work sheet
7. Preparing a profit and loss statement
8. Preparing a statement of change in net worth
9. Preparing a balance sheet
10. Journalizing the adjusting entries
11. Journalizing the closing entries
12. Posting the adjusting entries
13. Posting the closing entries
14. Ruling and balancing the accounts
15. Taking a post-closing trial balance
16. Journalizing the readjusting entries
17. Posting the readjusting entries
18. Ruling and balancing asset and liability accounts dealing with accrued and deferred items

A few comments on this list are in order. First, the exact number of steps in the outline is debatable. The list given is somewhat detailed, and it is quite possible to combine several operations. Again, it may not be desirable to follow this sequence. Steps 5 to 14, inclusive, are made at the close of the fiscal period. Exactly when a particular operation is done is largely a matter of necessity and convenience. It should be noted that these steps vary considerably in importance. Step 3, for example, requires but slight skill and time to perform, while step 5 requires considerable skill and time. Finally, it was found convenient in explaining some of the steps in the accounting cycle to depart from the order followed in this summary since

some relationships can be more easily explained by following a sequence other than this one.

Questions

Review.

1. Explain the function of the work sheet. What are its advantages?
2. Enumerate the steps in the preparation of a 10-column work sheet.
3. Discuss the preparation of the profit and loss statement and the balance sheet considering the following aspects:

   a. The detail to be shown
   b. The use of supporting schedules
   c. The heading of the statement
   d. The manner in which the various important items are to be shown

4. Distinguish between the report and the account form of the profit and loss statement.
5. What items should appear in the statement of change of net worth?
6. Distinguish between ruling and closing an account.
7. What steps are essential to close an account?
8. Should all accounts be closed? Explain.
9. Distinguish between the appearance and function of the final ledger summary and the balance sheet.
10. Enumerate the steps in the accounting cycle.

Discussion.

11. What should be the criterion for the addition of columns in the work sheet?
12. To what extent should an effort be made to standardize statement forms within the same industry? Should differences in capitalization and geographical location be given any weight?

Suggested Supplementary Readings

BOLON, D. S.: "Introduction to Accounting," Chaps. 16, 17, 18, and 19, John Wiley & Sons, Inc., New York, 1938.

JOHNSON, A. A.: "Principles of Accounting," Chap. 15, Farrar & Rinehart, Inc., New York, 1937.

MACFARLAND, G. A., and R. D. AYARS: "Accounting Fundamentals," Chap. 13, McGraw-Hill Book Company, Inc., New York, 1936.

PATON, W. A.: "Essentials of Accounting," Chap. 27, The Macmillan Company, New York, 1938.

PRICKETT, A. L., and R. M. MIKESELL: "Principles of Accounting," Chaps. 11 and 12, The Macmillan Company, New York, 1937.

ROREM, C. R.: "Accounting Method," Chaps. 11, 12, and 13, University of Chicago Press, Chicago, 1930.

CHAPTER VII

JOURNAL AND LEDGER SUBDIVISIONS

The operation of a general journal and a general ledger, as discussed in the last three chapters, are minimum requirements for any business keeping complete records. With the exceptions of small enterprises, however, most concerns use special adaptations of the journal and the ledger to economize in clerical costs and to present data in a more convenient form than the simple journal and the general ledger permit.

Columnar Journals.—As the transactions of a small enterprise increase in volume, the first change in journalization is likely to be the addition of special columns to the general journal. The selection of headings for the columnar journal depends on the frequency of transactions of a like nature. In the illustration on page 87 the column headings used are those which represent transactions occurring most often in a small or moderately sized business. One advantage resulting from this change is a saving in the posting process. One hundred sales recorded in a general journal in a given week would require 100 postings to the sales account. The same number entered in a columnar journal would necessitate only one posting, by total, to the sales account. A second advantage, which naturally follows, is the reduction of errors in posting. With the number of postings reduced, the possibility of error is decreased. A third advantage of the special column in the general journal is that certain classified data are available to management prior to their appearance in the ledger. This may be highly important when quick decisions based on these data must be made. Special columns should be added, however, only when the clerical economies in posting or the advantages to management warrant their extension.

Operation of the Special-column General Journal.—The principal considerations to be observed in operating a special-column general journal are as follows:

1. When a special column is used for each simple journal entry, only one of the two accounts affected is entered on a line

in the journal. The other half of the transaction is entered in the special column under which all similar items are recorded. For example, the purchase of merchandise on account from J. W. Wilson is recorded by entering the name of Mr. Wilson in the account column with whatever explanation is necessary. The debit amount is placed in the purchase column where it will be included in the total and posted to the debit of the purchase account; the credit amount is carried to the sundry credit column and posted immediately to Wilson's account and the page number placed in the ledger folio.

2. When both debit and credit amounts are carried to the sundry column, two lines are used for journalizing; and each account is posted individually with the page number of the account appearing in the folio column opposite the respective account title. The purchase return of J. W. Wilson of March 5 and the sale return of J. C. Steele of March 6 are examples of this type.
3. The same procedure is followed for compound entries. Each account title is given a separate line with the page number of the account appearing in the folio column. The journal entry recording the purchase of the delivery truck under date of March 4 illustrates the method of recording these entries.
4. When it is necessary for purposes of clarity to enter in the account column an account title which has a special column, the posting is made by total and the individual account title is checked in the folio column to prevent duplicate posting. For example, the cash sales and cash purchases under date of March 6 receive their postings to their respective accounts by totals only.
5. Each page is proved as it is completed. If no error has been made, the total of all debit columns will be equal to the total of all credit columns. Thus, errors in the equality of debits and credits can be localized to a given page.
6. If more than one page is used during a fiscal period, the totals of a given page are carried forward to their respective columns on the succeeding page.
7. When the column totals are posted, this should be indicated by placing the page number of the account, to which the

BAKER AND FORD

General Journal*

Date		Account	Explanation	F	Cash Dr.	Purchases Dr.	Sundry Dr.	Cash Cr.	Sales Cr.	Sundry Cr.
19—										
Nov.	2	J. W. Wilson	On account	29		750 00				750 00
		Office expense	Postage	39			7 00	7 00		
		J. C. Steele	On account	7			450 00		450 00	
	3	O. E. Martin	On account	25		500 00				500 00
		Advertising		37			35 00	35 00		
		A. L. Morrison	On account	26		600 00				600 00
		J. W. Wilson	On account	29			500 00	500 00		
	4	D. C. Stewart	On account	8	400 00					400 00
		Delivery Truck	Purchased from Allison	15			800 00			
		Cash	Auto Co. Note is for 60 days at 6 %	√				300 00		
		Notes Payable		20						500 00
		J. C. Steele	On account	7			300 00	300 00		
	5	J. W. Wilson	Merchandise returned from invoice	29			125 00			
		Purchase returns	of Nov. 2	31						125 00
		V. B. Jones	On account	24			600 00	600 00		
		O. E. Martin	On account	25	250 00					250 00
		Sales returns	Sales returned from invoice of Nov. 2	41			75 00			
		J. C. Steele		7						75 00
	6	D. C. Stewart	On account	8			350 00		350 00	
		Cash sales		√	200 00				200 00	
		J. C. Harris	On account	23		250 00				250 00
		Cash purchases		√		125 00		125 00		
					850 00	2,225 00	3,242 00	1,867 00	1,000 00	3,450 00
					(1)	(30)	√	(1)	(40)	√

* Frequently the account form of the columnar general journal is used instead of the form described. Its operation is the same as the one discussed but its appearance differs in that the column in which the account titles are written appears near the center of the form with debit and credit columns on either side.

totals are posted, directly beneath the respective total. Since items in the sundry columns have been posted individually, a check mark is placed beneath the total of this column to indicate that it has been considered.

Despite the advantages of special columns in the general journal, there are some undesirable features. A serious objection is that, as the business increases in size, division of bookkeeping work is most difficult if all the journalization is made in one book. Furthermore, with the increase in the volume of transactions, the extension of special columns in the general journal, although justified, may nevertheless cause it to be unwieldy and cumbersome and, as a consequence, may afford little or no reduction in the work of journalization.

Special Journals.—These difficulties may be avoided through the use of special journals. A *special journal* contains only transactions of a like nature. Through the establishment of several such journals, it is possible to divide the labor of journalizing among several bookkeepers. Moreover, the disadvantages of unwieldiness and cumbersomeness of large columnar general journals are not characteristics of special journals.

The basis for the installation of special journals is the same as that governing the establishment of special columns in the general journal—whenever a sufficiently large number of like transactions occurs, it becomes desirable to establish special journals because of the clerical economies afforded and the convenience of classified data for the management. Ordinarily most activity is shown in transactions affecting purchases, sales, cash receipts, and cash disbursements, and accordingly these four special journals are used more than any others.[1]

Purchase Journal.—The *purchase journal* contains all transactions relating to the purchase of merchandise stock in trade.[2] The same principle for the extension of columns is applied as has been before noted: Whenever the activity of certain types of

[1] Other special journals are frequently used for expense, capital stock, sales returns and allowances, and purchase returns and allowances.

[2] Often this journal is limited to purchases on account with all others being recorded elsewhere. While this method simplifies the operations in the purchase journal, it should be noted that it does not supply management with the total purchases or offer it all the information which may be given about them from a single source.

transactions warrant segregating them, either for reasons of clerical economy or because of the convenience of the data for managerial purposes, special columns should be installed. The form of the journal depends on the nature of the enterprise, its size, its operations, and the departments to be emphasized. In the illustration which follows, two departments are noted.

The most important points to be observed in the operation of this journal are the following:

1. All accounts appearing in the account column are individually credited and the page number of each account is entered in the folio column (except cash purchases discussed in step 2). The terms of purchase and any other significant data are noted in the explanation section.
2. When cash purchases are journalized, a check mark is placed in the folio column to indicate that the posting has been made elsewhere. For example, the cash purchase of $500 under date of August 1 appears in both the cash disbursements journal and the purchase journal. To avoid duplicate posting, a check mark is placed in the ledger folio column in both journals. The debit to the purchase

WALTER STETSON AND COMPANY

PURCHASE JOURNAL, AUGUST —, 19—

Date		Account	Explanation	F	Purchases Department *A* Dr.	Purchases Department *B* Dr.	Accounts payable Cr.	Sundry Cr.
Aug.	1	B. A. Hart	2/10, n/30	P10	100 00	50 00	150 00	
		Notes payable	60 day, 6 %, J. V. Blackburn	21	200 00	100 00		300 00
		Cash		✓	200 00	300 00		500 00
	2	A. S. Reed	2/10, n/30	P18		150 00	150 00	
	3	T. C. Wilcox	2/10, n/30	P40	125 00	150 00	275 00	
		C. H. Wardell	7/30	P37	100 00		100 00	
		Notes payable	60 day, 6 %, B. O. Fields	21	200 00	300 00		500 00
	4	W. C. Clark	2/10, n/30	P4	100 00	300 00	400 00	
		Cash		✓	200 00			200 00
	5	B. A. Hart	2/10, n/30	P10		50 00	50 00	
	6	T. C. Wilcox	2/10, n/30	P40		150 00	150 00	
					1,225 00	1,550 00	1,275 00	1,500 00
					(40*A*)	(40*B*)	(20)	✓

account is made by a total posting from the purchase journal; the credit to the cash account is made by a total posting from the cash disbursements journal.
3. Purchases are segregated by departments and the column totals carried to the debit of their respective accounts. The posting is noted by placing the ledger page number directly beneath the double-ruled line of the total.
4. All purchases made on account are entered in the accounts payable column. The creditor's accounts are posted individually. The total of the accounts payable column is carried to the credit of the account of that name.
5. All amounts not appearing in the accounts payable column are entered in the sundry column. These are posted individually to the respective accounts affected. The total of the column is checked to indicate that no total posting is to be made.
6. Sometime prior to posting the column totals, the journal is proved by adding the totals of all debit columns and comparing the amount with the totals of credit columns to be sure that the two are equal.

The Sales Journal.—In principle the operation of the *sales journal* is the same as that of the purchase journal. It contains transactions relating to the sales of merchandise or services. Although it is not necessarily so, it usually follows that the same departments appear in the sales journal as in the purchase journal.

The operation of the sales journal requires a consideration of the following points:

1. All accounts appearing in the account column are individually debited and the page number noted in the folio column (except, of course, items appearing in other journals). The terms of sale, description of notes taken, and any other information considered noteworthy, appears in the explanation section.
2. Sales are segregated by departments and postings are made by totals with the page number of the respective accounts written beneath the column totals.
3. All sales on account are entered in the accounts receivable column and the column total is posted to the account bear-

ing that name (see page 99 for further discussion). The page number is placed beneath the total.

4. The sundry column operates in the same manner as before noted—all postings are made individually and the column total is checked.
5. Cash sales are entered in both the cash receipts journal and the sales journal, and the folios are checked, as previously described, to prevent duplicate posting.
6. The totals of the debit columns are checked against the totals of the credit columns to prove the journal.

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SALES JOURNAL, AUGUST, 19__

Date		Account	Explanation		Sales Dept. *A* Cr.	Sales Dept. *B* Cr.	Accounts Receivable Dr.	Sundry Dr.
Aug.	1	H. W. Cox	2/10, n/30	R4	200 00	50 00	250 00	
		Cash		✓	75 00	200 00		275 00
	2	R. P. Stewart	2/10, n/30	R32	50 00	100 00	150 00	
		Notes receivable	60 day, 6 %					
			J. A. Harris	4	200 00	300 00		500 00
		Cash		✓	100 00	225 00		325 00
	3	O. A. Meany	2/10, n/30	R16	250 00	150 00	400 00	
		V. C. McEvoy	4/10, n/30	R15	2,000 00	500 00	2,500 00	
		Cash		✓	100 00	35 00		135 00
	4	Cash		✓	120 00	65 00		185 00
	5	C. H. Webster	2/10, n/30	R43	200 00	400 00	600 00	
	6	R. D. Stewart	2/10, n/30	R32	150 00	250 00	400 00	
		Cash		✓	65 00	100 00		165 00
					3,510 00	2,375 00	4,300 00	1,585 00
					(30*A*)	(30*B*)	(3)	✓

Cash Receipts Journal.—The *cash receipts journal* contains a record of all transactions relating to the receipt of cash. The principal considerations to be observed in its operation are as follows:

1. All items listed under the account column are posted individually to the credit of their respective accounts and the page number entered in the folio (except as noted in step 6).
2. The actual amount of all cash received is written in the cash column, and the total of the cash column is posted to

the debit of the cash account. The ledger page number is placed beneath the total.

3. Deductions from accounts receivable are entered in the sales discount column. This total is posted to the debit of the sales discount and the page number placed beneath the total.
4. The gross amount of accounts receivable is entered in the accounts receivable column. This total is posted to a single account in the general ledger (explained further on page 99). The page number is then written beneath the total. It should be noted that for any given entry appearing in the accounts receivable column, the total of the cash received plus the discounts taken is equal to the account receivable.

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CASH RECEIPTS JOURNAL,* AUGUST, 19__

Date		Account	Explanation		Cash Dr.	Sales Discount Dr.	Accounts Receivable Cr.	Sundry Cr.
Aug.	1	O. A. Meany	payment on account	R16	490.00	10.00	500.00	
		Walter Stetson	investment	25	500.00			500.00
		Sales	slips 178–191	√	275.00			275.00
	2	Notes payable	60 day, 6 per cent, First National	21	600.00			600.00
		Sales	slips 192–203	√	325.00			325.00
	3	C. H. Webster	payment on account	R43	245.00	5.00	250.00	
		Notes receivable	Note of J. B. Smith	4	200.00			200.00
		Interest income		36	3.00			3.00
		Sales	slips 204–211	√	135.00			135.00
	4	Sales	slips 212–223	√	185.00			185.00
	5	R. P. Stewart	payment on account	R32	392.00	8.00	400.00	
		H. W. Cox	payment on account	R4	194.00	6.00	200.00	
	6	Sales	slips 224–247	√	265.00			265.00
					3,809.00	29.00	1,350.00	2,488.00
					(1)	(32)	(3)	√

* A feature frequently included in the cash receipts journal is a bank column. Each time funds are deposited, the proper amount is placed in this column. The total is posted twice, to the debit of the account bearing the name of the bank and to the credit of the cash account.

5. All amounts which cannot be classified in special columns are placed in the sundry column. These amounts are

posted individually, and the page number of the respective account is placed in the ledger folio. Since postings have been made individually, a check mark is placed beneath the total to indicate that it is not to be posted.

6. When a cash sale is entered in the journal, a check mark is placed in the folio column to indicate that the posting has been made elsewhere. For example, the cash sale of $275 on August 1 is entered in the cash column. The specific sale is included in the total of that column and is carried to the debit of the cash account. A check mark is placed in the folio column to indicate that the sale is not to be posted individually to the sales account. The sale in question is included in the total of sales carried to the credit of that account (page 91).
7. Sometime prior to posting, the journal is proved by adding all debit columns to be certain that they are equal to the sum of the credit columns.

Cash Disbursements Journal.—All cash expenditures are recorded in the *cash disbursements journal.* The principal points to be observed in its operation are as follows:

1. All items appearing in the account column are debited individually to their respective accounts and the page number is placed in the folio column. The corresponding credit to cash is made by a total posting. Any explanation is placed in the column bearing that title. Regardless of whatever other explanation is noted, the number of the check issued in payment of the item should be given.
2. The cash column contains the actual amount disbursed. The total is credited to the cash account, and the posting is noted by writing the page number beneath it.
3. The total of the purchase discount column is posted to the credit of that account, and the fact is noted by placing the ledger page number beneath the total.
4. The total amount of a particular payable is entered in the accounts payable column, and the amount is posted individually to the account in question. It should be noted that for a given account subject to discount, the final payment is less than the full amount by the discount offered.

5. The sundry column operates in the same manner as explained in the other journals. The individual amounts appearing in this column are debited to the accounts affected, and the column total is checked.
6. As before described, items recorded in more than one journal are checked to prevent duplicate postings.

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CASH DISBURSEMENTS JOURNAL, AUGUST, 19__

Date		Account	Explanation	F	Cash Cr.	Purchase Discount Cr.	Accounts Payable Dr.	Sundry Dr.
Aug.	1	B. A. Hart	check No. 207	P10	727 50	22 50	750 00	
		Advertising	check No. 208	44	75 00			75 00
		Purchases	check No. 209	√	500 00			500 00
	2	Delivery expenses	check No. 210 (gas & oil)	45	15 00			15 00
		T. C. Wilcox	check No. 211	P40	386 50	13 50	400 00	
	3	Office equipment	check No. 212	13	115 00			115 00
		Postage	Check No. 213 to reimburse petty cash	52				7 00
		Office supplies		51				12 50
		Telegraph		53				2 00
		Miscellaneous expense		59	26 00			4 50
	4	W. C. Clark	check No. 214	P4	485 00	15 00	500 00	
		Purchases	check No. 215	√	200 00			200 00
		J. V. Blackburn	check No. 216	P3	291 00	9 00	300 00	
		B. D. Fields	check No. 217	P6	582 00	18 00	600 00	
	5	A. S. Reed	check No. 218	P18	388 00	12 00	400 00	
		Office supplies	check No. 219	51	20 00			20 00
	6	Payroll	check No. 220	62	200 00			200 00
					4,011 00	90 00	2,950 00	1,151 00
					(1)	(42)	(20)	√

Imprest Cash Fund.—The *imprest cash fund* is a supplementary device frequently used with the cash disbursements journal. Cash expenditures made by check provide a receipt and surround the disbursements with important safeguards. There are occasions, however, when it is not expedient to write a check for every item. The imprest petty cash fund is established to provide for small disbursements or cash demands at unusual times.

When the fund is established, an entry is made in the cash disbursements journal debiting petty cash and crediting the general cash account. Under the imprest system the petty cash

account is inactive; it remains the same unless the amount for which it was established is increased or decreased.

Payments are made from the fund as necessary, and, for each payment made, the keeper of the fund retains some type of receipt. This may be in the form of a petty cash voucher, an invoice, a sales ticket, or other form. A check upon the accuracy of the operation of the fund can be made at any time by adding the cash remaining in the fund to the total of the receipted bills. The sum should be equal to the amount for which the fund was established.

The petty cash fund is replenished at either of two times—when the amount remaining in the fund becomes low, or at the end of the fiscal period when adjustments must be made—when all expenses and liabilities must be included in the statements. In both cases the procedure is the same. The keeper of the petty cash fund is reimbursed for the expenditures made, and he gives the proper person all the receipted bills or petty cash vouchers he has accumulated in exchange for a check of like amount. An entry is then made in the cash disbursements journal for the expenses paid (or in a voucher and check register as shown on pages 105 and 106 under date of November 30). The keeper of the petty cash fund, after cashing the check, has on hand the amount for which the fund was established.

The General Journal When Special Journals Are Used.—Even though most of the transactions are removed from the general journal when special journals are used, it is in no sense useless. It fulfills two important functions. First, all transactions which cannot be recorded in some special journal are entered in the general journal. For example, the admission of a partner through the contribution of assets other than cash would be entered in the general journal, since there would be no other journal in which to record it. Again, unless special journals are established for returned sales and purchases, all such transactions would be entered in the general journal. A second function is that it provides space for detailed explanations which special journals do not offer. If, for example, the partner admitted (in the case just cited) made his contribution in cash instead of other assets, even though the entry would be recorded in the cash receipts journal, it might be desirable to place it in the general

journal, to check the folio to prevent duplicate posting, and to write a complete explanation of the transaction.

Controlling Accounts and Subsidiary Ledgers.—So far the discussion of special journals has proceeded without reference to subdivisions of the ledger. The use of special journals, however, usually accompanies the two principal devices used in the subdivision of the ledger—the controlling account and the subsidiary ledger. Specialized journals facilitate the use of controlling accounts by making possible postings by totals. A *controlling account* shows in summary, or by totals, the sum of balances in its supporting subsidiary ledger. A *subsidiary ledger* contains accounts of a like nature removed from the general ledger and placed in a special ledger. Subsidiary ledgers and controlling accounts must be considered jointly since the use of one necessitates the use of the other. No change can properly be made in one without that change being reflected in the other. Usually accounts receivable and accounts payable are the two most active groups, and, accordingly, controlling accounts and subsidiary ledgers are established for these two more often than for others.[1]

Advantages of Controlling Accounts and Subsidiary Ledgers.—There are two important reasons for the extension of the principle of controlling accounts and subsidiary ledgers: it may be advisable for clerical reasons, and it may be desirable for managerial purposes.

As more accounts are added to the general ledger, the increased length of the trial balance may present an unsatisfactory situation. The time required to prepare it is, of course, extended. Further, errors may be most difficult to locate.

The use of controlling accounts and subsidiary ledgers largely overcomes these drawbacks. Assume, for example, that the general ledger contains 75 customers' accounts. The steps in the establishment of the account receivable controlling account would be to remove the 75 customers' accounts from the general ledger, to place them in a special ledger, and to substitute a controlling account having a balance equal to the sum of all the accounts removed. Thus the trial balance would be reduced by

[1] In addition to these, however, controlling accounts and subsidiary ledgers are frequently established for notes receivable, materials, plant and equipment, bondholders, stockholders, and expenses.

SOURCES OF POSTINGS TO THE ACCOUNTS RECEIVABLE AND ACCOUNTS PAYABLE CONTROLLING ACCOUNTS AND THEIR SUBSIDIARY LEDGERS

Accounts	Debits		Credits	
	Principal Source	Minor Source	Principal Source	Minor Source
Accounts receivable controlling account	The total of the accounts receivable column in the sales journal	Miscellaneous individual items from the general journal	The total of the accounts receivable column in the sales journal	Miscellaneous individual items from the general journal
Accounts in the receivable ledger	Individual sale transactions from the sales journal	Miscellaneous individual items from the general journal	Individual items from the cash receipts journal	Miscellaneous individual items from the general journal
Accounts payable controlling account	The total of the accounts payable column in the cash disbursements journal	Miscellaneous individual items from the general journal	The total of the accounts payable column in the purchase journal	Miscellaneous individual items from the general journal
Accounts in the payable ledger	Individual cash payments from the cash disbursements journal	Miscellaneous individual items from the general journal	Individual purchases from the purchase journal	Miscellaneous individual items from the general journal

74 accounts since only those in the general ledger appear in the trial balance. When other controlling accounts are introduced, the trial balance is similarly reduced in size. With the reduction of the number of accounts appearing in the trial balance, the time required to prepare it is, of course, correspondingly reduced.

Furthermore errors are localized. An essential characteristic of the controlling account is that its balance is equal to the sum of all balances in its supporting ledger. If a given controlling account fails to agree with its subsidiary ledger, the error is localized—it is either in the controlling account or in the subsidiary ledger. No such localization is possible in the general ledger if controlling accounts are not used.

Operation of Controlling Accounts and Subsidiary Ledgers.—As before mentioned, accounts receivable and accounts payable are the two groups for which controlling accounts and subsidiary ledgers are most often established. The illustration on page 97 shows the sources of postings for these two controlling accounts and their supporting ledgers.

The first step in establishing a controlling account and a subsidiary ledger is to remove all accounts to be placed in the subsidiary ledger and for them to substitute a controlling account. Assume, for example, that the individual customer accounts appearing in the general ledger of Walter Stetson on August 1 were as follows:

H. W. Cox	$ 420
V. C. McEvoy	350
O. A. Meany	670
R. P. Stewart	560
C. H. Webster	480
	$2,480

These accounts are removed from the general ledger and a controlling account substituted by the following general journal entry:

Accounts receivable	2,480	
H. W. Cox		420
V. C. McEvoy		350
O. A. Meany		670
R. P. Stewart		560
C. H. Webster		480

No definite number of accounts can be cited as the proper number before it becomes worth while to use a controlling account and a subsidiary ledger. A common rule of thumb, however, is to set the total at 50.

As credit sales are made, the transactions are recorded in the sales journal, and the amount of each sale is posted immediately to the debit of the customer's account affected. The particular debit is included in the total of accounts receivable and is posted from the sales journal to the debit of the accounts receivable controlling account.

Credits to customer's accounts are posted individually from the cash receipts journal. The total of the accounts receivable column in the cash receipts journal is posted to the credit of the accounts receivable controlling account.

It is possible that debits or credits may be made from other sources. If, for example, there is no special journal for sales returns and allowances and H. W. Cox returns $35 worth of goods sold to him, the required entry in the general journal would be

Sales returns	35	
H. W. Cox		35

The debit item would be posted as usual. The credit item, however, must be posted twice, once to the accounts receivable controlling account and once to the customer's account in the subsidiary ledger. This does not disturb the equilibrium of debits and credits, since only the controlling account appears in the general ledger and only accounts appearing in the general ledger are included in the trial balance.

A check is made, nevertheless, between the controlling account and its supporting ledger to be certain that they are in agreement. A list of the account balances in the subsidiary ledger should be compared with the balance of the controlling account. This reconciliation should be made at least as often as the trial balance is taken.

Voucher Register.—The voucher system combines features of both the special journal and the special ledger. Although the *voucher register* is primarily a purchase journal, it is extended to include the journalization of all costs incurred. Under the voucher system the unpaid file of vouchers takes the place of the accounts payable ledger.

In order to understand the operation of the voucher register as a journal, a description of several features is essential. Outstanding among these is the recognition of all payables at the time they are incurred. This provides an important means of internal check[1] for the control of expenses. Ordinarily, without the voucher system, there is no record of expenses until they have

(Front)

Name ______________________ Voucher No. ____________
Address ____________________ Date (of voucher) ________

Date (Of Purchase)	Description	Amount

Prepared By ______________
Entered By ______________ Approved for Payment

(Reverse)

Distribution	Voucher No. ______
Purchases:	Name ______________
Department A ______	Address ______________
Department B ______	
Department C ______	
Selling Expenses	Date of Voucher ______
	Date of Purchase ______
	Due ______
	Terms ______
General Expenses	Amount ______
	Date Paid ______
	Check No. ______
Other Expenses	
Total	

Voucher form (front and reverse).

[1] For a discussion of internal check, see p. 192.

been paid. It may easily happen that an expense is incurred and no recognition of its existence made for as long as 60 days.

The voucher register not only recognizes the liability but also shows how it was paid. A realization of this fact is essential if one is to understand how cash purchases are recorded. Cash purchases of all kinds are recorded in the voucher register only after first recognizing the liability for the purchases. The recognition of the liability is part of the routine of operating the voucher system, the object being to divide authority among officials and thus secure a better system of internal check than would otherwise be possible. Thus all current liabilities and all costs thereby incurred are distributed in the voucher register, either in special columns or in the sundry column.

As a ledger the voucher system eliminates the formal accounts payable ledger and for it substitutes a file of unpaid vouchers. This substitution can be made to good advantage if each specific purchase can be considered as a unit for which a payment will be made. This arrangement may be most undesirable, however, if it is often necessary to know the amount purchased from each creditor. Again, if the specific obligation is not settled as a single item, but instead purchase returns, partial payments, or other adjustments are made, the required entries to effect these changes may make the system so cumbersome as to render it worthless.

Operation of the Voucher System.—The operation of the voucher system usually follows this procedure:

1. At the time materials or services are purchased, a voucher is prepared (page 100). This form contains space for a description of the goods or services purchased, the date, the amount, the name of the person or firm from whom the purchase has been made, and the terms of purchase. Each voucher is numbered. The voucher should be prepared with considerable care, for from it the transaction is recorded in the register. It serves to recognize the liability and to authorize its payment at the proper time.
2. The transaction is recorded in the voucher register (page 105) from the data on the voucher. Each line in the voucher register contains one item. The total amount of the voucher is entered in the payable (credit) column, and

the corresponding debit is entered in the appropriate column.

3. After the entry has been made, the voucher is filed according to the date when the discount should be accepted or, if no discount is offered, when the bill should be paid. This file of unpaid vouchers takes the place of the accounts payable ledger; it indicates the amount outstanding owing to creditors.
4. Postings are made by column totals, with the page number noted beneath the total, except in the case of the sundry column. Items appearing in this column are posted individually, with suitable notations in the ledger folio column. The total, of course, is checked.
5. As specific vouchers are paid, a check is drawn for the proper amount and a record is made in the check register. This register (page 106) operates in principle the same as does the cash disbursements journal. In the voucher register the number of the check and the date of payment are entered opposite the number of the voucher in question. When a voucher is paid, it is removed from the unpaid voucher file. The number of the check issued in payment is written on the face of the voucher. After all notations have been made, it is filed either in alphabetical or numerical order in the paid voucher file.
6. Partial payments, purchase returns, and notes present special problems. When a check is drawn for the partial payment of a voucher, it is recorded as usual in the check register and the voucher register. The amount of the payment is noted on the face of the voucher, and it is returned to the unpaid voucher file to await final settlement. The same type of notation is made on the voucher when purchases are returned. The transaction, however, is recorded in the general journal, and this fact is noted in the paid column of the voucher register. When a note is given in settlement of an account, the voucher is removed from the unpaid file, marked "paid," and filed among the paid vouchers. The transaction is recorded in the general journal, and proper notation is made in the paid column of the voucher register. An alternative method for recording returns, allowances, or partial payments consists of preparing a credit memoranda.

In appearance it is the same as or similar to a voucher. Essential data on the form should include a description of the deduction and the amount to be credited, the latter being written in red ink. The memoranda is then recorded in the voucher register in the usual manner, except that the amount is written in red ink. This amount will, of course, be deducted when the column is added.

ILLUSTRATIVE PROBLEM

On November 1, 19__, Walter Stetson and Company decided to install a voucher system. The creditors' balances on that date were as follows:

Creditor	Goods Purchased for		Total
	Department *A*	Department *B*	
A. S. Reed....................	$ 125		$ 125
B. A. Hart..................	200	$100	300
T. C. Wilcox..................		175	175
W. C. Clark	400	200	600
C. H. Wardell................	800	500	1,300
	$1,525	$975	$2,500

The purchases, other expenses incurred, and cash disbursements for the month of November were as follows:

November 1. Paid $125 to Hazelwood Realty Company for November rent.
2. Increased the amount carried in the petty cash fund by $35.
3. Paid A. S. Reed $125, less a 2 per cent discount.
6. Returned merchandise with a value of $200 to C. H. Wardell (purchased for Department *A*).
9. Purchased merchandise on account from T. C. Wilcox for $450 ($200 for Department *A*; $250 for Department *B*).
10. Paid B. A. Hart $300, less a 2 per cent discount.
13. Paid United Trust and Savings Bank $2,000 in settlement of a matured note (assume that the discount charge has been recorded and that no adjustment is necessary).
15. Purchased merchandise on account from B. A. Hart for $150 (Department *B*).
16. Purchased merchandise on account from A. S. Reed for $850 ($550 for Department *A*; $300 for Department *B*).
17. Received an invoice for gasoline and oil from Penn Oil Company for $35 (used by delivery truck).

November 20. Paid W. C. Clark $600, less a 2 per cent discount.

23. Gave T. C. Wilcox a 60-day 6 per cent note for $175 in payment of the amount due November 1.

24. Purchased merchandise on account from A. S. Reed for $750 (Department *B*).

27. Purchased merchandise for cash from J. B. Wilson amounting to $850 ($600 for Department *A*; $250 for Department *B*).

30. Paid the payroll for November:

To Ruth Wilson	$ 75
John Cole	90
Frank Ritter	225
Fred Rivers	80
Total	$470

30. Paid the invoice received from Outdoor Advertising Company on November 21.

The petty cash fund was replenished for the following disbursements made during the month:

Telegraph	$ 3
Postage	22
Community Fund	15
Stationery	8
	$48

The first step in recording the data of this problem is to transfer the various amounts from the subsidiary accounts payable ledger to the voucher register. For example, a voucher is prepared for the purchase from A. S. Reed, and from it an entry is made in the voucher register. Similarly for each unpaid purchase a numbered voucher is prepared and recorded in the voucher register under the name of the person to whom the amount is owed. The voucher register illustration (page 105) has fewer columns for the distribution of charges to various accounts than is ordinarily found.

Returned purchases are recorded in the general journal and proper reference is made to the entry in the paid column of the voucher register (see entry of November 6, page 106). The same procedure is followed when a note is given in payment of an account (see entry of November 23).

When a cash purchase is made, a voucher is prepared for the purchase (see entry under date of November 27 on pages 105 and 106), and a check is issued in payment of it.

VOUCHER REGISTER

Date		Creditor	Voucher Number	Paid Date	Paid Check Number	Vouchers Payable Cr.	Purchases Department *A* Dr.	Purchases Department *B* Dr.	Sundries Account Dr.	F	Amount
19—				19—							
Nov.	1	A. S. Reed	1	Nov. 3	3	125	125				
		B. A. Hart	2	10	4	300	200	100			
		T. C. Wilcox	3	23	JE 11/23	175		175			
		W. C. Clark	4	20	6	600	400	200			
		C. H. Wardell	5	6	JE 11/6	1,300	800	500			
		Hazelwood Realty	6	1	1	125			Rent	60	125
	2	Petty cash	7	2	2	35			Petty cash	2	35
	9	T. C. Wilcox	8			450	200	250			
	13	United Trust & Savings	10	13	5	2,000			Notes payable	24	2,000
	15	B. A. Hart	11			150		150			
	16	A. S. Reed	12			850	550	300			
	17	Penn Oil Co.	13			35			Delivery expense	54	35
	21	Outdoor Advertising Co.	14			40			Advertising	52	40
	24	A. S. Reed	15			750		750			
	27	J. B. Wilson	16	27	7	850	600	250			
	30	Payroll	17	30	8	470			Salaries	62	470
		Petty cash (reimbursement)	18	30	9	48			Telegraph	68	3
									Postage	67	22
									Community Fund	65	15
									Stationery	66	8
						8,303	2,875	2,675			2,753
						(25)	(40)	(41)			√

CHECK REGISTER

Date		Creditor	Check Number	Voucher Number	Vouchers Payable	Purchase Discount	Cash
19—							
Nov.	1	Hazelwood Realty................	1	6	125.00		125.00
	2	Petty cash.......................	2	7	35 00		35.00
	3	A. S. Reed	3	1	125 00	2 50	122.50
	10	B. A. Hart.......................	4	2	300.00	6.00	294.00
	13	United Trust and Savings Bank	5	10	2,000.00		2,000.00
	20	W. C. Clark......................	6	4	600 00	12.00	588.00
	27	J. B. Wilson.	7	16	850 00		850 00
	30	Payroll..........................	8	17	470 00		470.00
		Petty cash (reimbursement)..	9	18	48 00		48 00
					4,553 00	20.50	4,532 50
					(25)	(73)	(1)

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19—				
Nov.	6	Voucher payable...	200	
		Purchase returns (department *A*)........		200
		Goods purchased Oct. 17 from C. H. Wardell		
	23	T. C. Wilcox............................	175	
		Notes payable (60 days 6 per cent).......		175
		For goods purchased Oct. 12		

Relation between Specialized Journals, Controlling Accounts, and Subsidiary Ledgers.—Specialized journals, controlling accounts, and subsidiary ledgers are closely related. Special journals facilitate the use of controlling accounts by providing special columns which, in turn, make possible postings by total—an essential feature in the operation of controlling accounts. The use of a subsidiary ledger containing accounts of a like nature necessitates a controlling account in the general ledger to show, in summary form, the increases, decreases, and balances of all accounts in the supporting ledger over which it exercises control.

These three devices are the principal ones used in the subdivision of the journal and ledger. The occasion giving rise to the subdivision is the same in the journal as in the ledger. Whenever a large number of transactions in the journal or accounts in the ledger occur, if they are of the same general type, cumbersome records can be avoided, clerical economies can be effected, and data can be classified and presented to management in a more

usable manner through the subdivision of the journal and the ledger.

The voucher system is an application of the principle of journal and ledger subdivision. The voucher register is a highly specialized purchase journal. The file of unpaid vouchers is a substitute for the accounts payable ledger. Other subdivisions may be made according to the requirements of the individual business whenever the activity of transactions or accounts justifies their use.

Questions

Review.

1. What are the advantages of using special-column general journals? When should they be installed?

2. In what respects are special journals more desirable than special columns in the general journal?

3. What is the determining factor as to whether special journals should be used? Subsidiary ledgers? Controlling accounts?

4. Name the principal special journals commonly used?

5. Explain how a cash sale would be recorded if all cash receipts are entered in the cash journal and all cash disbursements are placed in the sales journal.

6. Is the general journal of any significance when specialized journals are used?

7. Discuss the procedure for operating an imprest petty cash fund when:

a. The fund is established.
b. Payments are made from the fund.
c. The fund is replenished.

8. What advantages result from the use of controlling accounts and subsidiary ledgers?

9. What are the sources of debits and credits to the following controlling accounts:

a. Accounts receivable
b. Accounts payable
c. Expense

10. In what respects does the voucher system contain features of the special journal? Of the special ledger?

11. When is the installation of a voucher system advisable? Inadvisable?

12. How is the record of cash disbursements changed when a voucher system is used?

Discussion.

13. Explain how specialized journals, subsidiary ledgers, and controlling accounts are related.

14. Is a cash account which receives postings from a cash journal a controlling account? Why?

15. Assuming the existence of proper specialized journals, subsidiary ledgers, and controlling accounts, explain how a purchase made from a customer (who has no account in the accounts payable ledger) would be recorded. Do not propose to open an account in the accounts payable ledger.

Suggested Supplementary Readings

BOLON, D. S.: "Introduction to Accounting," Chaps. 11 and 12, John Wiley & Sons, Inc., New York, 1938.

COLE, W. M.: "The Fundamentals of Accounting," Chaps. 11–13, Houghton Mifflin Company, Boston, 1921.

MCKINSEY, J. O., and H. S. NOBLE: "Accounting Principles," Chaps. 8 and 9, South-Western Publishing Company, Cincinnati, 1939.

NEWLOVE, G. H., L. C. HAYNES, and J. A. WHITE: "Elementary Accounting," Chaps. 9–11, D. C. Heath & Company, Boston, 1938.

PATON, W. A.: "Essentials of Accounting," Chaps. 9, 11, and 12, The Macmillan Company, New York, 1938.

PORTER, C. H., and W. P. FISKE: "Accounting," Chap. 6, Henry Holt & Company, Inc., New York, 1935.

ROREM, C. R.: "Accounting Method," Chaps. 14–16, University of Chicago Press, Chicago, 1930.

CHAPTER VIII

PROBLEMS OF VALUATION

A study of procedures and statements is apt to leave one with the impression that accounting possesses the logical coherence and consistency of an exact science. Orderly columns of figures in the books and statements imply an exactness and a finality to accounting values which, in fact, do not exist. While the statements are most useful as a guide to management, investors, and others, the scope of their usefulness can be appreciated only when something is known of the methods of valuation and the limitations imposed upon the apparent exactness of values appearing in them.

Effect of Valuation on Financial Status and Operations.—This knowledge is important because both the balance sheet and the profit and loss statement are affected by current valuations. To illustrate this, consider the case of a machine with a purchase price of $1,000. Whether the machine is valued at its cost of $1,000 or possibly at $850 at the end of the fiscal period clearly has a direct bearing upon the financial status of the business. If the machine is valued at $850 instead of $1,000, both the asset and proprietorship are decreased by $150. If this decrease was due to the wear and tear occasioned by use, the $150 would be treated as an expense and thereby decrease the profit for the period by this amount.

Conservatism in Valuation.—To consider the statements as reflecting the financial status or the results of operation with mathematical accuracy is to overlook the effect of economic and political forces upon the enterprise. While it may be most difficult, if not impossible, to evaluate these forces, to ignore their presence limits the usefulness of the accountant's judgment.

Since problems of valuation are so frequently matters of judgment and since absolute accuracy cannot be obtained, there has developed among accountants the attitude that the statements should reflect conservative judgment or, specifically, that

assets or profits should never be overstated. The result of such a practice, it is believed, will induce conservative management, and the financial strength of the enterprise will be less damaged than from alternative policies.

This doctrine is commonly expressed by the following statement: "Anticipate no unrealized income and provide for all possible losses." So impressed have many accountants become with the necessity of conservatism that the rule of "cost or market, whichever is the lower" is widely accepted as the principle for the valuation of most current assets (by cost is meant the purchase price; by market, the replacement price).

The length to which conservatism should be carried is undoubtedly a matter of judgment. Proper provision should be made for losses which may reasonably be expected. On the other hand, the application of this principle to the extent that legitimate estimates of revenue or profits are understated cannot be accepted as a proper application of the doctrine.

Accounting Assumptions Influencing Problems of Valuation.—Other factors influencing problems of valuation are the assumptions made in accounting theory. One of these is that the enterprise is a going concern—that it will continue to operate and to perform the functions which the management intends. Consequently any thought of business failure, with the resultant lowered values placed upon the assets, does not normally influence their valuation.

A second assumption is that only assets and equities measurable in dollars and cents are within the scope of accounting treatment. The probable effect of political, economic, or social changes and the loyalty or efficiency of a company's personnel may be of extreme importance but are not considered in the statements.

Still another assumption is that the value of money is constant. As yet accounting practice does not reflect changes in the value of the dollar in the statements.[1]

A fourth assumption is that, initially (*i.e.*, at the time it is purchased), the cost of an asset determines its value. This does not mean, of course, that the asset remains on the books at the cost price. As it is used in the business, its value changes. It

[1] For the discussion of an accounting technique which considers changing price levels, see Henry W. Sweeney, "Stabilized Accounting," Harpers & Brothers, New York, 1936.

does mean, however, that the accountant considers the asset worth what has been paid to acquire it.[1]

Valuation and Functional Uses of Assets.—Still another influence affecting the valuation of assets is the function which they perform. From the management point of view, fixed assets as a group are used in the conduct of the business, in the manufacture or sale of commodities or services. Ordinarily they will not be disposed of so long as they can be used for the purpose for which they were purchased. In terms of function performed, therefore, the ideal basis of valuation for fixed assets is the cost of securing the services rendered by the asset.

In contrast, current assets are consumed within a short time in business operations. They will be used, primarily, for the purchase of merchandise or services and for payments for expenses or for obligations of the firm. Current assets, not already in the form of cash, will be shortly converted into cash. Hence the ideal basis of valuation for this group, in terms of function performed, is their cash realizable value.

Cash.—No difficulty is experienced in applying this rule to cash. It is not always apparent, however, what should be included in the category of cash. Cash on hand and in banks (not, of course, deposits in closed banks), bank notes, bank drafts, postal and express money orders, individual checks, in fact, everything that serves the purpose of cash should be included. Foreign currency should be excluded unless it may readily be converted into domestic currency, and, even so, suitable reserves should be established for fluctuations.

Cash to be used for a specific purpose should also be excluded. If it is being accumulated for the payment of a bond issue, for example, it is not ordinarily available for the payment of current liabilities and therefore should be excluded from the current assets.

Bank Reconciliation Statement.—The exact amount of cash which should appear in the balance sheet, however, may not be obtained solely from data in the cash account. Seldom does the amount of cash in the ledger account agree with the balance of the bank statement as of the same day. Hence a reconciliation of the two must be made and suitable adjustments entered on the

[1] For an extended discussion of accounting postulates, see W. A. Paton, "Accounting Theory," Chap. 20, The Ronald Press Company, New York, 1922.

books before the proper amount of cash can be included in the statement. Assume, for example, that the checkbook balance on December 31, 19__, was $1,318.62 and that the balance of the bank's statement was $1,248.12 and that upon investigation, the following discrepancies were discovered:

1. Checks outstanding consisted of the following:

No. 762	$ 25.00
No. 764	17.50
No. 765	150.00
No. 767	132.00
No. 768	37.50
	$362.00

2. A deposit of $419 was made on December 31, but the amount was not included in the bank statement.
3. The bank statement included protest fees of $2, a collection charge of fifty cents, and interest credited by the bank amounting to $4.50.
4. The following errors were made in writing checks:
   Check No. 712 was written for $250; on the check stub it was recorded as $252.50.
   Check No. 757 was written for $153; on the check stub it was recorded as $135.

When placed in statement form the reconciliation between the checkbook balance and the bank statement will appear as follows:

BANK RECONCILIATION STATEMENT

December 31, 19__

Balance per bank statement				$1,248.12
Add:				
Protest fee		$ 2.00		
Collection charge		.50		
Deposits		419.00		
Error in check No. 757		18.00		
Total additions			$439.50	
Deduct:				
Interest credited by bank		$ 4.50		
Checks outstanding:				
No. 762	$ 25.00			
No. 764	17.50			
No. 765	150.00			
No. 767	132.00			
No. 768	37.50	362.00		
Error in check No. 712		2.50		
Total deductions			369.00	
Net additions				70.50
Balance per checking account				$1,318.62

It should be noted that the discrepancy between the checking account balance and the bank statement may be due to items not considered by the bank or by the company. In the latter event, adjustments must be made on the books of the company to include these items. Specifically, in the illustration under discussion, the required adjusting entry is as follows:

Cash	2.00	
Protest fees	2.00	
Collection charges	0.50	
Interest income		4.50
To include the adjustments of interest income, protest fees, and collection charges		

In the event that differences cannot be located, these discrepancies are entered in an account for cash short and over. If this account has a debit balance, it is treated as an item of miscellaneous expense; if a credit balance, an item of miscellaneous income.

Marketable Securities.—The valuation of marketable securities is closely related to cash. In this classification are included securities of unquestioned liquidity which the enterprise would not hesitate to sell if additional funds are necessary. While the weight of logic would seem to favor market value as the basis of valuation, in practice, cost or market, whichever is the lower, is commonly used. The reason for this, of course, is the desire for conservatism. Whatever method is adopted, it should be indicated in the balance sheet.[1]

Accounts Receivable.—Like cash, realizable value is the basis for the valuation of accounts receivable. Under accounts receivable are included amounts due from trade debtors, claims of a readily collectible nature arising in the ordinary course of trade. Amounts due from other debtors (from employees, officers, or others, for example) should be shown under other titles.

It is most unlikely that the total amount of receivables outstanding at the end of the fiscal period will be collected. The past experience of the enterprise is the best criterion for determining probable losses. Accordingly a reserve for doubtful accounts is provided to care for the estimated losses. The most

[1] Securities are sometimes valued at cost, with their market value noted in the balance sheet. Still another method consists of valuing the securities at cost and setting up a reserve for market fluctuations to care for any disparities between cost and market price.

common method of estimating the amount of doubtful accounts is to base the losses on the sales for the fiscal period or on the outstanding accounts receivable. Assuming that the outstanding accounts amount to $150,000 and that estimated losses from doubtful accounts amount to 2 per cent, the entry to record this at the close of the fiscal period would be as follows:

Bad debts....................................	3,000	
Reserve for doubtful accounts...............		3,000

The bad debt account is an operating expense,[1] a cost of securing the revenue sales. To fail to recognize it before the loss actually occurred would mean that the fiscal period in which the loss materialized would bear a cost properly chargeable to a previous period.[2]

The reserve for doubtful accounts is a valuation account which when considered in conjunction with the account to which it refers (accounts receivable) shows the estimated cash realizable value of that asset. In the balance sheet the reserve account is deducted from the asset to show the net amount.

If the amount of bad debts has been overestimated, the excess credit balance in the reserve account should be treated as a non-

[1] Two other methods of classifying bad debts are sometimes used. One considers the expense as a deduction from gross sales on the basis that revenue from sales is overstated by the amount of uncollectible accounts receivable. Another method treats bad debts as a loss chargeable to net income, if originating in the current period, and chargeable to surplus, if originating in an earlier period. This is based on the assumption that the values shown in accounts receivable are correct until proved otherwise.

[2] When an account written off as worthless is later collected, the accounting treatment to be followed depends on the conditions of sale, write-off, and collection.

If the sale, write-off, and collection are all made in the same fiscal period, the account receivable in question would be debited to place the asset on the books, and bad debts would be credited to remove the charge previously made. Cash would then be debited and accounts receivable credited.

If the account was collected in the same period in which it was written off but the sale was made in a previous fiscal period, then the same procedure would be followed as in the first case except that the reserve for doubtful accounts would be credited instead of bad debts.

If the collection was made in a period later than the one in which the sale and write-off occurred, then the amount should be placed in surplus or some other account which does not affect the determination of profit for the current period.

operating item of income. If the balance remaining is very small, it is frequently left in the reserve account.

The same type of an adjustment is made for outstanding sales discounts.[1] Assume that at the close of the fiscal period there are outstanding sales discounts amounting to $600. On the basis of past experience it is estimated that 75 per cent of these will be accepted. During the following fiscal period the actual discounts accepted totaled $500. At the close of the fiscal period the estimated sales discounts (75 per cent of $600) which probably will be accepted are shown as follows:

Sales discounts	450	
Reserve for outstanding sales discounts		450

In the succeeding period cash is debited as accounts are paid and discounts are accepted; the reserve for outstanding sales discounts is debited, and accounts receivable are credited. This continues until there are no longer any remaining accounts which were outstanding at the close of the past fiscal period and which are still subject to discount. Any amount remaining in the reserve for outstanding sales discounts should be treated as a nonoperating item chargeable against the net income from operations of the period. If the balance is small, it is often left in the reserve account, and the sales discounts of a subsequent period charged against it.

Notes Receivable.—In general, estimated cash realizable value should be used for the valuation of notes receivable as well as for accounts receivable. In practice, however, notes receivable are usually listed at face value and any of doubtful collectibility are taken from the account and shown under a separate caption. Notes other than those obtained from trade debtors should also be shown separately.

[1] Two methods are commonly used in classifying sales discounts. According to one point of view they should be treated as financial expense because the discount is offered as an incentive. When receivables are paid promptly, there are, of course, fewer losses from bad debts. Hence sales discounts should be considered as a collection expense.

According to the other point of view, sales discounts are a deduction from gross sales since the net income from sales is reduced by the amount of the discounts accepted. Hence they should be classified the same as sales returns and allowances—as a deduction from the gross revenue received from sales.

When a note receivable has been discounted, a special problem of valuation arises. The party discounting the note and endorsing it is liable for payment upon maturity if the maker fails to pay it.

To illustrate the procedure of discounting a note, assume that, on February 2, *A* gave to *B* a 90-day 6 per cent note for $500 in settlement of an account. Thirty days later the note was discounted at the bank at a 6 per cent rate. When the note matured, *A* defaulted in his payment. The protest fee amounted to $1.25. Subsequently *A* was declared bankrupt, and his creditors received a final payment equal to 60 per cent of their claims.

B will record the note as follows:

Notes receivable	500	
A (accounts receivable)		500

When the note is discounted, the entry will be

Cash	502.42	
Interest income		2.42
Notes receivable discounted		500.00

The contingent liability of *B* is shown by the account notes receivable discounted. In the balance sheet it is deducted from notes receivable to show the net amount held.

The following procedure is used to compute the discount:

1. Ascertain the maturity value of the note. In the example used it is found by determining the interest on $500 for 90 days at 6 per cent. This amount is added to the face value of the note resulting in a maturity value of $507.50.
2. Find the amount of the discount charge by multiplying the maturity value of the note by the rate of discount for the discount period. The maturity value, $507.50, multiplied by the rate of 6 per cent, for the period of 60 days, results in a discount of $5.08.
3. Determine the amount received by the person discounting the note. This is done by deducting the discount charge from the maturity value. The maturity value is $507.50; the discount charge is $5.08; hence the amount received is $502.42.

When the maker of the note refuses payment, *B* is liable for the face value of the note, the interest, and the protest fee. This is recorded on *B*'s books as follows:

Notes receivable dishonored	500.00	
Protest fee	1.25	
Interest expense	7.50	
Cash		508.75

At the same time the note is removed from the notes receivable account because of its doubtful collectibility, and the contingent liability is removed from the books because of its changed status. This is shown by the following entry:

Notes receivable discounted	500	
Notes receivable		500

This entry is made whenever the contingent liability no longer exists (either through payment of the note by the maker or by conversion to a real liability through the maker's failure to pay upon maturity). If, within a reasonable time, the dishonored note together with the other charges are not paid, they are placed in an open account by the following entry:

A (special account receivable)	508.75	
Notes receivable dishonored		500.00
Protest fee		1.25
Interest expense		7.50

The journal entry to record the final amount (60 per cent of $508.75) received from *A* would be as follows:

Cash	305.25	
Loss on dishonored notes	203.50	
A (special account receivable)		508.75

As soon as the loss is evident, it is charged against operations if originating during the current fiscal period; if originating in a previous fiscal period, it is charged to a suitable reserve account (if one has been established), to proprietorship or to some non-operating expense.

Merchandise Inventory.—The problems of valuation discussed previously in this chapter are relatively simple compared to those presented by merchandise inventory. The fact that this asset, unlike the others discussed, appears in both the balance sheet and the profit and loss statement has an important bearing upon these difficulties. Ideally, goods on hand, ready for sale, should be valued in the balance sheet the same as other current assets, at

cash realizable value. Ideally, inventory in the profit and loss statement should be valued at cost, since profits or losses can be determined accurately only by ascertaining the difference between revenue and expenses.

In practice neither basis is used consistently by most enterprises. The commonly accepted rule for the valuation of inventory is cost or market, whichever is the lower.[1] This rule is prompted by a desire for conservatism so that no inventory will appear in the balance sheet at more than its realizable price and no profit will be anticipated in the profit and loss statement.

The inventory account should include all merchandise, regardless of whether it is held in the possession of the firm or elsewhere. It should exclude all stocks not owned by the company. The account contains all costs necessary in order to bring the merchandise to the form in which it is ready to be sold. Included among these are the original purchase price, incoming freight and drayage, and insurance. Items incurred after the goods are ready for sale and located at the place of sale are usually distribution costs.

There are three types of merchandise inventory accounts ordinarily used, raw material, goods in process, and finished goods. The raw material account contains the value of goods bought and before processing. The goods in process account contains the value of material, plus other assignable costs which have entered into the manufacture of partially completed products. The finished goods account contains the value of those goods which have completed the final stage of the manufacturing process.

Determining Cost of Merchandise.—The cost of merchandise inventory depends on the method used to obtain it. In order to illustrate this, three methods of determining inventory value will be briefly described and compared.

First, in terms of simplicity, is the basis of actual cost for each unit. When it is possible to ascertain without difficulty the costs of particular quantities on hand, this method may prove to be desirable. Especially is this true in wholesale and retail concerns. In these enterprises (in contrast to those engaged primarily in the production of goods) profits are measured by comparing the

[1] For a description of other methods of valuation, see "Accountants' Handbook," pp. 381*ff.*

revenue received from sales with the actual cost of obtaining the revenue.

Often, however, it is not practicable to value each item of merchandise but instead to use some method of estimating it. One of the simplest methods is to compute the average price. This is done by adding the various prices per unit and dividing by their number. The units in the inventory multiplied by the average price per unit results in the value of the inventory (see illustration on page 120). The simple average fails to consider, however, the difference between purchases of large and small amounts.

The weighted-average cost method overcomes this objection. This method gives due weight to the prices at which given quantities are purchased. If, however, the inventory turnover is rapid, it may easily happen that no portion of merchandise purchased during the earlier part of the fiscal period is left in the final inventory. When this condition prevails, the computation of inventory by the weighted-average method may present an unrealistic value, for in most merchandising fields the old stock is sold first and the stock on hand is kept as fresh as possible.

The recent purchase (first-in-first-out) method is in accord with this practice. It is based on the assumption that the oldest stock is sold first and that the inventory consists of those units most recently purchased. Furthermore, since the prices are taken of the last quantities purchased, they at least approximate replacement or market price.

To better explain these three methods[1] of estimating cost, assume that the physical inventory is 5,000 units and that the other significant data are as follows:

Date	Quantity	Price per Unit	Amount
Dec. 3	5,000	$1.35	$ 6,750
7	2,500	1.30	3,250
12	1,000	1.25	1,250
20	1,500	1.25	1,875
30	2,000	1.20	2,400
Total..........	12,000	$6.35	$15,525

[1] Other methods of determining merchandise inventory cost are to be found in the cost accounting texts listed at the end of Chapter XIII.

A Comparison of the Simple Average, Weighted-average, and Recent-purchase Methods of Computing Inventory Cost

Method of Valuation	Computations	Inventory Value
Simple average......	5,000 units × \$1.27(\$6.35 ÷ 5)	\$6,350.00
Weighted average....	5,000 units × \$1.29375(\$15,525 ÷ 12,000)	6,468.75
Recent purchase.....	Dec. 30. 2,000 units × \$1.20 = \$2,400	
	20. 1,500 units × 1.25 = 1,875	
	12. 1,000 units × 1.25 = 1,250	
	7. 500 units × 1.30 = 650	6,175.00

Cost or Market, Whichever Is Lower.—According to the basis of valuation, cost or market, whichever is the lower, market value or replacement value must be used if it is less than cost. The market price may be obtained from newspapers, trade publications, or from direct correspondence with those selling the commodities.

The application of the market or cost price requires that each group of items be individually valued and that cost or market, whichever is the lower for the particular group, be selected. The effect of this is shown by the following example:

	Cost	Market	Lower of Cost or Market
Product *A*......................	\$ 5,000	\$ 5,350	\$ 5,000
Product *B*......................	1,250	1,250	1,250
Product *C*......................	8,500	8,250	8,250
Total......................	\$14,750	\$14,850	\$14,500

Thus in the balance sheet the valuation of inventory at cost or market, whichever is the lower, is indeed a most conservative basis. It places in this statement an amount lower than either the total purchase cost or the estimated replacement cost of inventory.

In the profit and loss statement the application of this rule raises difficulties. Assume, for example, that the inventory at the end of a fiscal period, valued at cost, amounted to \$15,000, and that the other items in the trading section are as follows:

Sales			$100,000
Cost of goods sold:			
Inventory—beginning	$10,000		
Purchases	60,000		
Goods available for sale		$70,000	
Inventory—ending		15,000	
Cost of goods sold			55,000
Gross profit			$ 45,000

If the same conditions of the illustration prevail, except that the final inventory amounts to $13,000 and is valued at cost or market, whichever is the lower, then the gross profit for the period would be reduced by $2,000,[1] as shown by the following statement:

Sales			$100,000
Cost of goods sold:			
Inventory—beginning	$10,000		
Purchases	60,000		
Goods available for sale		$70,000	
Inventory—ending		13,000	
Cost of goods sold			57,000
Gross profit			$ 43,000

In the succeeding fiscal period when the inventory of $13,000 becomes the beginning inventory, the effect is to increase profits by $2,000 over what they would have been had the purchase cost of $15,000 been used. When the two fiscal periods are considered, the effect of using the lower replacement cost figure is nil.

Despite the widespread acceptance of the rule of cost or market, whichever is the lower, this basis has not met with unqualified approval.[2] A compromise measure designed to overcome these

[1] This assumes that the $2,000 is included in the inventory. If the amount in question is carried to the nonoperating section of the profit and loss statement, neither gross profit nor profit from operations will be affected.

[2] "The traditional view has been that merchandise should normally be valued at its cost, but that, when the market price is less than the cost, the latter should be substituted. Confessedly illogical, this practice became rather general in the United States, being approved of by most accountants as having the merit of conservatism. . . . But one can easily see that in many cases the crude rule, cost or market whichever is lower, is in no sense *truly* conservative." Hatfield, H. R., "Accounting," p. 99, D. Appleton-Century Company, Inc., New York, 1927.

"The vogue of 'cost or market, whichever is the lower,' has been brought about in considerable measure by the preoccupation of accountants with

objections is sometimes followed by setting up a reserve for inventory fluctuation. Under this system the inventory is valued at cost and a reserve for inventory fluctuation is established. To establish the reserve the following entry would be made:

Surplus	2,000	
Reserve for market fluctuations in inventory		2,000

An alternative treatment would be to establish the reserve by charging a nonoperating expense item as follows:

Inventory adjustment	2,000	
Reserve for market fluctuation in inventory		2,000

The reserve would be deducted from inventory in the balance sheet in the same manner as the allowance for doubtful accounts is deducted from accounts receivable. After the reserve has served its purpose, it may be closed into net income or surplus or readjusted to the requirement of the inventory of the new fiscal period.

Supplies and Prepaid Expenses.—The supplies inventory is taken in a manner similar to the merchandise inventory. The first step consists of counting all items on hand. Postage, stationery, and all other current expenses which have unused quantities remaining are counted and valued at cost.

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the statement of financial condition, as opposed to the income sheet, and with the somewhat unintelligent attitude of commercial bankers toward such statement. From the standpoint of the presentation of reports which shall be useful to the operating management the rule is a nuisance rather than a bit of business wisdom. That it is bad reporting to overstate the asset values in the balance sheet may be taken for granted, but it may be insisted that the adoption of the 'cost or market' policy throughout the preparation of the statements is a very clumsy and ineffective way of attempting to avoid such overstatement. If instead of accepting 'cost or market' as an almost sacred tenet of the profession, beyond criticism, public accountants would take time off to examine the effects of the policy on comparative income reports, it is safe to assume that there would be a rapid waning of the enthusiasm for this approach to inventory valuation." Paton, W. A., "Essentials of Accounting," p. 486 (New York, 1938). By permission of The Macmillan Company, publishers.

"The old rule, 'cost or market, whichever is lower,' in some cases permits true conditions to be ignored and it may inject into the balance sheet a false and misleading element." Montgomery, R. H., "Auditing Theory and Practice," p. 182, The Ronald Press Company, New York, 1927.

Prepaid expenses are treated in a like manner. Rent, advertising, insurance, taxes, and other current operating expenses paid in advance are usually valued on the cost basis.

Supplies and prepaid expenses furnish good examples of the relation between assets and expenses. With few exceptions an expense is an expired asset value. As the asset portions of supplies and prepaid items are used, the expired portions become expenses. The problem of valuing items in this category consists of determining what portion of the amount in an account is unused and hence an asset, and what portion is used and therefore an expense.

Questions

Review.

1. Explain how the balance sheet and the profit and loss statement are affected by the valuation of assets.
2. Defend the policy of conservatism in valuation.
3. Give four assumptions in accounting which influence the valuation of assets.
4. Explain how the function performed by an asset affects its method of valuation.
5. On what basis should the following be valued:

   a. Cash
   b. Marketable securities
   c. Accounts receivable
   d. Notes receivable
   e. Merchandise inventory
   f. Supplies and prepaid expenses

6. What is the purpose of the bank reconciliation statement?
7. Why is a reserve for doubtful accounts established?
8. What is the purpose of the notes receivable discounted account?
9. When should a loss arising from an uncollectible account be charged to

   a. The current fiscal period
   b. The reserve for doubtful accounts
   c. Proprietorship

10. Should any record be kept of unpaid accounts receivable even after they have been written off?
11. What adjustment should be made if the amount placed in the reserve for doubtful accounts proves to be more than is needed?
12. Explain the following methods of pricing inventories;

    a. Average price
    b. Weighted average
    c. Recent purchase

Discussion.

13. "The balance sheet and the profit and loss statement are expressions of opinion and not of fact." Evaluate.

14. "A bad debt is a legitimate business item. It is quite conceivable that a credit manager should be criticized adversely for attempting to keep this expense too low." Defend this statement.

15. The following objections, among others, have been offered to the inventory basis of valuation cost or market, whichever is the lower:

a. It greatly increases the work of pricing the inventory.

b. Decreases in values are recognized, increases are not; hence the rule is inconsistent.

Discuss these objections.

CHAPTER IX

PROBLEMS OF VALUATION.—(*Concluded*)

In terms of function, fixed assets are sharply distinguished from current assets. They are decidedly of secondary importance to the credit status of the enterprise, since it is not the purpose of fixed assets to be converted into cash. Instead they are used in the production or sale of commodities and are kept in the business so long as they continue to perform the function for which they were acquired.

The Relation of Depreciation to the Fixed Asset.—In economics fixed assets have been termed "installment service goods,"[1] a form of capital which for the most part is held in reserve but which gives off services by installments. If, for example, a machine costing $1,000, lasting 10 years and having no residual worth, declines in value at a constant rate, the cost of acquiring this service is $100 per year. This decline in the value of the asset is termed "depreciation" and is one of the costs of securing revenue for the period.[2] Depreciation, in accounting, includes not only those causes contributing to the lessened value of an asset due to use but also those causes due to the passage of time.[3]

[1] Taylor, F. W., "Principles of Economics," p. 63, The Ronald Press Company, New York, 1922.

[2] Here again is an illustration of the relation between an asset and an expense. The expense, depreciation, is the expired fixed asset value chargeable to the operations of a given accounting period.

[3] "Accountants' Handbook," p. 579, lists the following as the principal causes:

1. Ordinary wear and tear in use
2. Unusual damage or deterioration
3. Exhaustion
4. Limited possibility of use
5. Inadequacy
6. Obsolescence
7. Cessation of demand for product

Capital and Revenue Expenditures.—The problem of accounting for asset values, in contrast to that of determining the cost of securing its service, or depreciation, finds expression in the distinction between capital and revenue expenditures. Care should be taken not to associate the term "expenditures" solely with cash. An expenditure, as the term is used here, may also be made by incurring a debt.

Capital expenditures increase the value of a fixed asset. The acquisition of a new asset, additions in value to those already owned (as, for example, the construction of a new wing on the factory) and expenditures commonly termed "betterments" result in the assets being increased in usefulness or possessing greater capacity than before. These three types are the most common forms of capital expenditure.

Revenue expenditures are made for the purpose of securing income. They apply exclusively to the current period. Repairs and maintenance charges, for example, are made in order to enable operations to continue at a desirable standard of performance. Presumably they do not increase the life of the asset beyond the point at which it was originally calculated.

A clear distinction between a capital and a revenue expenditure is of extreme practical significance in determining financial status and the earnings of a period. Confusion in the classification of expenditures results in a misstatement of assets and earnings. If a revenue expenditure is erroneously classified as a capital expenditure, both asset values and profits are inflated; if a capital expenditure is erroneously classified as a revenue expenditure, the asset values and profits are deflated by the same amount.

Despite the importance of this distinction, it is not always easy to discriminate between capital and revenue expenditures.[1] Expediency is sometimes the deciding factor. A large railroad

[1] Dewing cites such a case with the following example: "Thus it may cost a railroad $500,000 to eliminate a grade crossing in a populous suburb of a large city. Clearly the need for the change has been increasing as the suburb grew, and its advantage will be felt for years to come, yet the railroad will collect no more fares after the grade crossing is gone, nor will its cost of operation be appreciably less; its property is no more valuable, as a railroad, than it was before the money was spent." Dewing, A. S., "The Financial Policy of Corporations," p. 530, The Ronald Press Company, New York, 1926.

might find it cumbersome and costly to attempt a fine distinction between capital and revenue expenditures for transactions involving small amounts. From the standpoint of comparing the results of one fiscal period with the results of another, it is not as important to insist upon a border-line distinction as it is to follow a consistent policy. In order to assure uniformity in this and other points, many companies have found it advisable to define their policy and to include a statement of it in a manual prepared for the guidance of those working on their records.

Methods of Computing Depreciation.—The problem of accounting for depreciation is, in one important respect at least, similar to that of discriminating between a capital and revenue expenditure; it involves a distinction between capital and revenue. The failure of the life span of the asset to coincide with the fiscal period raises the question as to how much of the total cost shall be retained on the books as capital (fixed asset) and how much shall be treated as a charge against revenue (depreciation).

There are various methods of determining the amount of depreciation to be charged off at the end of a fiscal period. In this country the straight-line method[1] is most commonly used. It apportions depreciation at a uniform rate over the useful life of the asset. For example, assume that a machine costing $970 has an estimated life of nine years and a residual value of $70. The residual value subtracted from the cost leaves $900 to be apportioned over a period of nine years. If the fiscal period is one year, the annual depreciation charge will be $100. Simplicity of computation is the greatest advantage offered by this method. To some, however, it is an oversimplification of the whole problem of apportioning depreciation. One criticism often cited is that it fails to distinguish in its periodic charges between operating periods of great and of slight activity.

The production method of apportioning depreciation meets this objection. The important difference between the two is that the straight-line method is computed on a time basis, while the production method is computed on a performance basis. According to the production method, the total number of units

[1] It is called the straight-line method because, when the successive book values of the diminishing asset are plotted on a diagram, a straight line is formed.

the machine will produce, or the total service it will render in its useful life, is first estimated. The assignable cost is then determined by deducting the scrap value from the cost recorded in the account. The total output in terms of production, or service, is divided into the assignable cost. The result is the depreciation charge per unit. If we make the further assumption, in the illustration just cited, that the machine will produce an estimated 200,000 units during its useful life, then its assignable service cost ($900) divided by the output (200,000 units) results in a per unit depreciation charge of $0.0045. Thus, if the output of the first fiscal period is 25,000 units, the depreciation charge would be $112.50. Despite the merit possessed by this method, it is often difficult to make an accurate estimate of the total output during the life of an asset—with the result that its usefulness is limited accordingly.

There are numerous other methods of apportioning depreciation.[1] It may be charged off at increasing, decreasing, or fluctuating amounts over the life span of the asset. The lack of agreement as to the proper method to use is not so important as it is to recognize that depreciation is a definite expense, the cost of securing the service of a fixed asset. The amount, regardless of how it is determined, must be definite; it cannot be varied according to whim without failing to protect adequately capital investment and to state profits with reasonable accuracy.

Buildings, Equipment, and Machinery.—In general the usual assets subject to depreciation are buildings, equipment, and machinery. The same basis applies to all: cost less depreciation. The term "cost" is usually more inclusive than the initial outlay for the asset. For example, the account buildings may include the demolition charges necessary to remove an old building and clear the site. Such an item is a proper charge to the building (if the land is owned by the business prior to incurring the cost) since it is an essential cost of conditioning the ground before erecting the building. Interest on borrowed money which has been used to finance the erection is likewise considered a proper construction cost. The interest cost ceases, of course, upon the completion of the building. The distinction between capital and revenue charges is particularly important in valuing buildings. All

[1] For an explanation of other methods see the "Accountants' Handbook," p. 626.

necessary repairs are treated as revenue charges; all improvements are considered capital expenditures.

The same principles apply to machinery and equipment. The cost of these assets include full installation expenses plus any additions or betterments.

Recording Depreciation.—Inasmuch as the manner of recording depreciation is similar for buildings, equipment, and machinery, a single illustration will be used to discuss the journal entries required. Assume that machine 1 is purchased at the beginning of a fiscal period (one year) with an invoice cost of $900; express charges paid by the enterprise amount to $25; installation costs incurred amount to $45. Assume further, that the machine is estimated to have a life of nine years, a residual value of $80, and a removal cost of $10. In the middle of the third year it is sold for $750.

The journal entry required to record the purchase of the machine would be as follows:

Machinery	970	
Cash (or accounts payable)		970
To record the purchase of machine 1 invoice cost, $900; express charges, $25; installation costs, $45		

Depreciation for the first year,[1] computed on a straight-line basis, would be recorded by the following entry:

Depreciation of machinery	100	
Reserve for depreciation of machinery		100

Depreciation for the second year and the first six months of the third year would be journalized as follows:

Depreciation of machinery	100	
Reserve for depreciation of machinery		100
Depreciation of machinery	50	
Reserve for depreciation of machinery		50

[1] The net amount expected to be realized from the sale of the asset, $70 (the residual value of $80, less the removal cost of $10), is subtracted from the total cost of the machine, $970, to obtain an amount of $900. If this cost is apportioned over the nine-year life span of the asset on a straight-line basis, the result will be an annual depreciation charge of $100. The profit of $30 from the sale of the asset is obtained by subtracting the book value of the machine, $720 (the cost of $970 less the depreciation written off for 2½ years, $250), from the $750 realized from its sale.

The accumulated depreciation on the machine sold is removed from the reserve account and carried to the machinery account by the following entry:

Reserve for depreciation of machinery	250	
Machinery		250

The cash received and the profit made on the sale of the machine is recorded as follows:

Cash	750	
Machinery		720
Profit on sale of fixed asset		30

Appreciation.—The recognition of appreciation is subject to much less general approval by accountants than is that of depreciation. If appreciation has been realized, accounting practice substantiated by court decisions approves its recognition.

There is no such general agreement, however, on the matter of estimated or unrealized appreciation. The more conservative accountants feel that it should not appear on the books because it anticipates profits. The objection to this position can be overcome, for the most part, if estimated appreciation is kept out of the earnings for the period and out of surplus available for the declaration of dividends. Assuming that land held for sale by the company has, according to conservative estimate, appreciated $5,000, this may be shown on the books by the following entry:

Land	5,000	
Reserve for land appreciation		5,000

The valuation account, reserve for land appreciation, is subtracted from the land account in the balance sheet. This method, which may be used with any asset, draws attention to the fact that in the opinion of the management appreciation should be noted. Nevertheless it avoids the danger of declaring dividends out of a surplus which has not been realized.

Land.—The valuation of land is similar to the other fixed assets discussed, since it is valued at cost. It differs markedly, however, in that, if the company intends to hold the land for use, neither appreciation nor depreciation is usually recognized. This practice is based on the assumption that land held for use will continue to serve in the future as well as in the present and

that, since market value has no effect upon this use, neither appreciation nor depreciation is significant in its valuation. All capital expenditures such as attorneys' fees, guarantee of title, recording of fees, grading, filling, leveling (in general, those costs necessary to prepare the land for its intended use) are proper additions to the cost of land.

Depletion.—When land holdings are in the form of timber tracts, oil wells, mines, or other forms which are consumed in the operation of the business, a charge is made to operations for the expired value of the resources. This expense is termed *depletion.* Provision for depletion must be made, otherwise the capital of the business will have disappeared with the removal of the last unit of timber, oil, or other product. To compute depletion the total yield of the natural resource is first estimated. Then an amount is apportioned to each fiscal period on the basis of physical output. The resulting depletion cost is chargeable against the revenue of the period. The corresponding credit is either to the property account or to an allowance for depletion account. Although the determination of depletion is a most difficult problem, a failure to recognize it, with the subsequent declaration and payment of dividends, results in the return of the capital investment to the stockholders—a legitimate procedure only if the management and the stockholders clearly understand that the business is being liquidated.

Intangibles.—The valuation of intangibles is subject to greater uncertainty than are any of the assets previously discussed. There may be slight relation between the recorded value of an intangible and its real worth. A highly successful invention, for example, is usually worth much more to the business than the cost price of the patent would indicate. It is not cases such as this, however, that have aroused skepticism but rather those which result in the overvaluation of intangibles. Goodwill, particularly, has in the past proved a most adaptable device for manipulation.

The fact that conservative accounting practice requires that intangibles be excluded from the accounts unless a definite price has been paid for them makes for even further uncertainty. It is quite common for a firm having considerable goodwill to have no recorded amount on its books, because there has been no act which occasioned its purchase. In contrast, a firm having

much less goodwill may show a substantial amount because of circumstances which led to its purchase.

The doubt surrounding the valuation of intangibles begins with the selection of items to be included under this classification. Accounts receivable, for example, are never included under the intangible caption, but logically it would be most difficult to prove that they are more tangible than either trade-marks or franchises.

The separation between tangible and intangible items is based on custom. The principal items included under intangibles are goodwill, patents, copyrights, trade-marks, leaseholds, franchises, organization expenses, and formulas. These are frequently divided into two distinct types: those which have a more or less definite term of life, and those which do not. In the first group are patents, copyrights, and leaseholds. Here the legal life span is definite, even though the economic life span may not be. A patent is a government grant entitling the owner to the sole right, usually for 17 years, to make or sell an invention or process. Its full cost should be written off over the economic life of the asset which in no case should exceed its legal life.

The copyright is similarly valued. It is a legal right given to an author which permits him to publish, exclusively, certain written material. Usually the copyright affords this protection for 28 years.

Likewise, the leasehold should be valued at cost and amortized over a period not longer than that covered by the contract.

The second group of intangibles (those which have an indefinite life span) include goodwill, trade-marks, formulas, and organization expenses. Foremost among the items in this group is goodwill. Its value is determined by capitalizing the earnings in excess of those of a representative business. The causes for the excess earnings are numerous. Goodwill may come into existence through an established reputation for fair dealing, a favorable business location, an efficient well-managed organization, a personnel with profitable social or business connections, a special advantage in purchasing or marketing goods; a judicious use of a trade-mark or trade name; or the use of a patent with monopolistic results.

The computation of the goodwill of a business requires a knowledge of the following:

1. The value of tangible assets
2. The normal rate of return on capital invested in the industry as a whole
3. The rate of capitalization of excess earnings

Suppose, for example, that a given business had net tangible assets valued at $50,000 and for a number of years had realized an average of 12 per cent on its investment. Assume further that the normal return on the capital invested in the industry is 10 per cent. The excess return of $1,000 per year earned by the enterprise would be computed as follows:

$50,000 at 12 per cent	$6,000
$50,000 at 10 per cent	5,000
Excess return	$1,000

If it is agreed that the excess profits can be expected to last five years (or that the rate of capitalization of excess earnings is 20 per cent), the resultant goodwill is $5,000.

Goodwill, like other items in the second group, should be valued at cost. The fact that excess earnings exist does not warrant placing goodwill on the books unless it has been purchased. To do otherwise would result in an item of a most questionable nature. The procedure would be comparable to appreciating any asset without its value first being realized by a sale.

There is no complete agreement as to whether the intangibles of this second group should be kept on the books or be written off. According to one point of view, unless the value of the particular items has been impaired, they should be retained on the books, at cost, so long as they contribute toward earnings. Hence they are not subject to amortization in the same manner as those intangibles which have a definite legal life span.

According to another point of view, cost is an unsatisfactory index of what the patent, franchise, or other intangible having an indefinite life span is really worth, and further, because of the general discredit and skepticism accorded the valuation of intangibles, it is preferable to write off the assets as quickly as possible.

Liabilities.—Considerably less difficulty is usually experienced in the valuation of liabilities than of assets. This is particularly true when the liability is known and the claim is definite. Here the face value of the obligation is the basis of valuation.

A more serious problem lies in the certainty that all liabilities are shown. This may present difficulties in those cases of contingent liabilities where the ultimate liability is unknown, such as notes receivable which have been discounted, merchandise in transit, guarantees given on services rendered or articles sold, or contracts given when the service to be performed has not yet been rendered. Often the best that can be done in these cases is to estimate the probable liability. Frequently no amount is shown in the balance sheet, but, instead, a footnote or a parenthetical notation is included, drawing attention to the contingency.

Net Worth.—The correct valuation of net worth is to a large extent dependent on an accurate valuation of assets and liabilities, since this equity is the difference between these two. One important requirement is to show clearly the equities of the different groups of proprietorship. Specific problems in the valuation of net worth are considered in the two succeeding chapters.

Questions

Review.

1. What is the difference between current and fixed assets?
2. Explain how depreciation may be used to illustrate the relation between an asset and an expense.
3. Distinguish between a capital and a revenue expenditure. Why is this distinction important? What is the result of a failure to properly distinguish between the two?
4. Explain the straight-line method of computing depreciation. What are its advantages? Its disadvantages?
5. Discuss the advantages and the disadvantages of the production method of computing depreciation.
6. What is the basis of valuation for

    a. Buildings, machinery, equipment
    b. Land held for use
    c. Land held for sale
    d. Patents, copyrights, and leaseholds
    e. Goodwill, trade-marks, and formulas

7. Discuss the principal problems in recording appreciation.
8. What is the result of a failure to recognize and record depletion?
9. Discuss the difficulties in the valuation of liabilities.
10. What is the important requirement in the valuation of net worth items?

Discussion.

11. "When a reserve for depreciation is properly kept, there will be enough money set aside to buy a new asset when the old one wears out." Refute this statement.

12. "Why bother with depreciation anyway? We use an asset as long as we can operate it, then throw it away and buy another." Is this practice defensible?

13. "Depreciation should be related to the capacity of the business to absorb the expense. In years of profitable operations the depreciation charge should be greater than in years when the business has operated at a loss." Discuss.

Suggested Supplementary Readings

HATFIELD, H. R.: "Accounting," Chaps. 2–6, D. Appleton-Century Company, Inc., New York, 1927.

KESTER, R. B.: "Principles of Accounting," 4th ed., Chaps. 24 and 25, The Ronald Press Company, New York, 1939.

PORTER, C. H., and W. P. FISKE: "Accounting," Chap. 14, Henry Holt Company, Inc., New York, 1935.

ROREM, C. R.: "Accounting Method," Chaps. 21–30, University of Chicago Press, Chicago, 1930.

SANDERS, T. H., H. R. HATFIELD, and U. MOORE: "A Statement of Accounting Principles," Part III, American Institute of Accountants, New York, 1938.

CHAPTER X

INDIVIDUAL PROPRIETORSHIP AND PARTNERSHIP

The two preceding chapters on problems of valuation dealt primarily with assets and to a less extent with liabilities, while the problems of net worth were postponed to this chapter and the succeeding one for consideration. The valuation of net worth depends largely upon the form of the business organization. The three most important of these forms are the individual proprietorship, the partnership, and the corporation.

Individual Proprietorship.—In the individual proprietorship a single person owns the business. Its greatest advantage is the independence afforded the owner. In this respect it is noticeably superior to the partnership or the corporation. The ease and economy of organization, the lack of restrictions on the initiative of the owner, and the comparatively slight interference in the affairs of management may be advantages of sufficient importance to warrant using the sole proprietorship in preference to other forms of organization.

The principal types of accounting entries dealing with the valuation of the net worth of an individual proprietorship are those of organization, distribution of profit or loss, and dissolution of the business. No separate consideration is given to these transactions, since their treatment would be duplicated largely in the discussion of partnership problems, which will be presented in the order indicated.

The Partnership as a Desirable Form of Business Organization.—In general the partnership is preferable to the sole proprietorship when more capital is required than can be furnished by an individual or when a combination of abilities is needed.

Two definitions of the partnership have found wide acceptance. Chancellor Kent has described it as "a contract of two or more competent persons, to place their money, effects, commerce or business, or some or all of them in lawful commerce or business, and to provide the profit and bear the loss, in certain propor-

tions." The Uniform Partnership Act provides the following definition: "A partnership is an association of two or more persons to carry on as co-owners a business for profit."

In at least two important respects the partnership offers advantages over the incorporated organization. First, it is superior to the corporation in definiteness of legal status. The widespread acceptance of the Uniform Partnership Act has made it possible to know what to expect when legal difficulties arise within those states operating under the act. In contrast, some state corporation statutes have been loosely drawn and no court interpretations have been given; consequently their legal status is unknown. This fact has influenced many corporations to incorporate in those states where adequate legal interpretation has been given to the statutes. Moreover, the corporation is subject to blue-sky legislation—restrictions on the issue of securities. There is no comparable interference with the sale of partnership shares.

The second advantage of the partnership is that usually no more restrictions are placed on its movements than if it were an individual. It can operate with a freedom and secrecy wholly lacking in a corporation. It is not ordinarily required to submit numerous reports to state authorities, is not subject to special taxes, and in general does not have its activities as rigidly restricted as a corporation does. Like the individual proprietorship, the partnership is easy to organize. The necessary formalities and costs of organization are considerably less than they are when the business is incorporated.

Articles of Partnership.—The partnership[1] is so lacking in the formalities of organization that it is not even essential to have written partnership agreements. The law will infer relationships from the acts of the partners. It is desirable, however, that articles of partnership be drawn in order to anticipate causes for disagreement and to forestall friction among partners by clarifying all possible causes for misunderstanding. Important points to be included in the articles of partnership are

[1] Unless otherwise specified, the term "partnership" applies to a general partnership, "one wherein the members carry on all their trade and business for their joint benefit and profit." Similarly, the term "partner" used without qualification refers to a member of a general partnership. For a detailed classification of partnerships and of partners, see Corpus Juris (47 C. J., pp. 463*ff.*).

1. The name of the partnership.
2. The names of the partners.
3. The date on which the partnership begins.
4. The location of the business.
5. The scope of the business.
6. The amount of each partner's investment.

   If the capital contribution is made in property, it is important that the valuation be accurate. Once invested, the partners become joint owners.
7. Duties of the partners.

   Duties and obligations of the partners to each other are governed by the articles of partnership. In the absence of any agreement, each partner has the right to participate generally in the affairs of the partnership.
8. Restrictions to be imposed on the partners.

   All members of the partnership are bound by the acts of any partner committed within the scope of the business. Any restrictions imposed on the members which might involve the partnership (for example, endorsing notes of others, becoming sureties, etc.) should be included in the partnership agreement.
9. The amount of withdrawals to be allowed.
10. Provisions for keeping partnership records.

    The length of the accounting period, the statements to be prepared, and any accounting procedures likely to cause controversy should be fully covered.
11. Sharing of profits and losses.

    In the absence of provisions to the contrary, both profits and losses are shared equally, regardless of capital investments. Furthermore, unless otherwise specified, losses of the partnership are borne in the same proportion that profits are shared.

    Another factor affecting the sharing of profit or loss is whether interest should be credited on capital. If there is no agreement among the partners, interest is neither credited for capital balances nor charged for withdrawals.

    Salaries similarly affect the amount of profit or loss to be distributed among the members. In the absence of provisions to the contrary, no salaries are payable to

partners regardless of capital contributions, abilities, or time spent in the business.

12. Duration of the partnership.

    Although the life of the partnership may be terminated by several causes (see page 147), it is indefinite unless otherwise specified. Partnership interests cannot be transferred except with the consent of the remaining partners. The withdrawal of any partner without the assent of his copartners renders him liable to a suit for damages for any injuries suffered. Because of the difficulties of terminating a partnership, it may be desirable to limit its life to a relatively short time. Then, if conditions are satisfactory, the partnership may be renewed for a longer period.

13. Provisions for the admission of new partners.

    An outstanding characteristic of the partnership is that of unlimited liability of the partners. Since all members are jointly liable for all debts of the firm and further since each partner can incur obligations of the firm, it is especially important that considerable care surround the selection of new members.

14. Provisions for dissolution.

15. Special provisions.

    Typical considerations which might be included under this section are the selection of arbitrators in the event of dispute, basis for the valuation of goodwill upon the retirement or death of a partner, procedure in the event of liquidation, and the amount of insurance to be carried on the partners' lives.

A Share in the Profits and a Share in the Business.—A fundamental distinction which must be grasped before provisions in the partnership agreement or accounting problems of partnership can be understood is the difference between a share in the profits and a share in the business. If, for example, a partner has a one-third share in the profits, he will receive one-third of them and bear one-third of the losses (unless his loss-sharing ratio differs from his profit-sharing ratio). If, however, he possesses a third interest in the business, he owns one-third of all the net assets (total assets less total liabilities). This does not imply that he

receives the same amount of profits. Unless specifically stated in the articles of partnership or by oral agreement, there is no relation between capital invested and profits shared. In the absence of any agreement among the partners, profits or losses will be shared equally, regardless of their respective investments. The distinction between a share in the profits and a share in the business is important, for the first is a question of profit distribution, the second a problem of capitalization—the subject now under discussion.

Organization Entries.

Case One.—When the amount paid by the incoming partner is equal to the book value of the share acquired.

Probably the simplest case of capitalization is the investment of the incoming partner of an amount equal to the book value of the share acquired. Assume, for example, that *A* has property valued at $20,000. *B* invests sufficient cash to acquire a one-third share in the business. His investment will be recorded by a single entry:

Cash	10,000	
B capital		10,000

Case Two.—When a revaluation of assets is required before a new partner is admitted.

Assume that *A*'s balance sheet is as follows:

Cash	$ 1,000	*A* capital	$20,000
Accounts receivable	3,000		
Merchandise	7,000		
Buildings	7,000		
Land	2,000		
	$20,000		$20,000

Assume further that, prior to the admission of *B*, it is agreed that accounts receivable are overvalued $100, merchandise $240, and buildings $400. *B* is admitted to a one-third interest in the partnership after these valuations have been taken into consideration. The following entry is necessary in order to adjust the assets to their new values:

A capital	740	
Accounts receivable		100
Merchandise		240
Buildings		400

After this entry is made, *A*'s net worth will be $19,260. This amount is equal to two-thirds of the proposed partnership capitalization ($28,890). *B*'s investment will be equal to one-third of the total capitalization and will be journalized as follows:

Cash	9,630	
B capital		9,630

Case Three.—When the incoming partner pays more than the book value of the share acquired.

Assume that *A*'s investment amounts to $20,000 and that *B* acquired a one-third interest by investing $12,000. If *B* has not overpaid for his share, he will expect to hold a one-third interest in a business having a total net worth of $36,000 (three times $12,000, the amount paid for his interest). But the sum of *A*'s investment ($20,000) plus *B*'s ($12,000) results in a total of $32,000, or $4,000 less than the recorded values. This difference is goodwill, which in this case has resulted from conditions within the business prior to *B*'s entrance. It is treated as a profit to *A* and is recorded by the following entry:

Goodwill	4,000	
A capital		4,000

B's cash payment is recorded as follows:

Cash	12,000	
B capital		12,000

If *A* had other partners aiding him in the development of goodwill, the various partner's capital accounts would receive credits in proportion to their profit-sharing ratio. If a complete statement of the new partnership assets is shown, goodwill must be recorded.

It may not be desirable, however, to place goodwill on the books. Its valuation has been subjected to so much abuse that investors and others have become skeptical of its significance. Consequently many believe that it should be omitted from the balance sheet. Conservative accounting practice sanctions this omission and favors the adjustment of capital accounts.

In the illustration under discussion, if goodwill is not to be recorded and the capital accounts are to be adjusted, the total capitalization will be $32,000 (*A*'s capital of $20,000 plus *B*'s capital of $12,000). The entry to record *B*'s investment would be the same as before:

Cash	12,000	
B capital		12,000

Since the total capitalization is limited to $32,000 and *A* has a two-thirds interest, his capital account should have a balance of $21,333.33. *B*'s capital account should have a balance of $10,666.67 (one-third of $32,000). To adjust the capital accounts, the following entry would be necessary:

B capital	1,333.33	
A capital		1,333 33

If the incoming partner pays more than the book value of the share acquired because he is anxious to be associated with the firm and not because the share is worth what has been paid for it, this difference must be considered as a bonus to those who were members of the firm prior to the admission of the new partner.

Case Four.—When the incoming partner pays less than the recorded book value of the share acquired.

Again, assume that *A*'s investment is $20,000 and that *B* acquires a one-third interest by the payment of $7,500. The reason for making the offer to *B* may determine whether goodwill should be placed on the books. If *B* brings with him connections or abilities which will increase the earnings of the business and for which *A* is willing to pay, then an intangible asset may be placed on the books. The title of this intangible should describe the circumstances responsible for admitting *B* to the enterprise for an amount less than the book value of the share acquired. Since *A* has a capital investment of $20,000 and a two-thirds interest in the business, the total partnership capitalization is $30,000. If *B*'s share is one-third, he expects the book value of his share to be $10,000, or $2,500 more than the amount he pays. This difference may be recorded by the following entry:

(An account title which describes the nature of the intangible asset contributed by the incoming partner)[1]	2,500	
B capital		2,500

[1] The title goodwill cannot be properly used to describe this asset. Goodwill arises because a given enterprise has an earning capacity greater than that enjoyed by a representative concern in the same industry. It is quite possible that the intangible asset used in this entry would arise for

The cash investment would, of course, be recorded as follows:

Cash	7,500	
B capital		7,500

If through a desire to be conservative or if an urgent need for new capital prompted the offer to *B*, the $2,500 in question should be treated as a bonus. The total capitalization would be the sum of *A*'s capital ($20,000) and *B*'s investment ($7,500). *A*'s capital account would show a balance equal to two-thirds of this total ($18,333.33), and *B*'s capital account would show a balance equal to one-third of the total ($9,166.67). The entry necessary to adjust the partnership capital accounts would be as follows:

A capital	1,666.67	
B capital		1,666.67

Case Five.—When the incoming partner purchases an interest from a retiring partner.

Assume that *A*'s interest (valued at $20,000) is purchased by *C* for $22,500. If the purchase is made without revaluations of goodwill or other assets, the transaction concerns only *C* and *A*. The entry necessary to effect the change is as follows:

A capital	20,000	
C capital		20,000

The fact that *C* pays more than the book value of the share acquired does not affect the capitalization of the partnership, since in this case, the transaction is a personal one between the incoming and the retiring partner.

The Partner's Accounts.—A second major problem in partnership accounting is that of distributing profits or losses to the partners. Their equities are usually shown by the capital account and the personal account. The capital account contains the original investment, substantial additions and reductions to capital, and the balance of the personal account at the close of the fiscal period. The personal account contains transactions involving a relationship between the proprietor and the business, except decreases in capital or additional investments of consider-

the opposite reason—because the business has an unsatisfactory record of earnings and hence the incoming partner refuses to join the enterprise except by paying less than the recorded book value of the share acquired. The exact title used here should be indicative of the reason why the amount of $2,500 came into being.

able amounts. If necessary, more than one personal account may be set up to record special relationships. For example, a drawing account may be established to record the cash withdrawn by a partner. Essentially then the capital account shows the vested proprietorship of the partner, while the personal accounts indicate the current changes in proprietary interest. For example, if *A* and *B* share profits in the ratio of 75 per cent and 25 per cent, respectively, and the profit for the period amounts to $4,000, it would be transferred to the personal accounts by the following entry:

Profit and loss	4,000	
A personal		1,000
B personal		3,000

Balances of the personal accounts are then closed into the respective capital accounts.

Distribution of Profits or Losses.—The distribution of profits or losses is frequently complicated by the fact that partners do not make equal contributions of services or capital. To adjust these inequalities it may be desirable to use different methods for distributing profits or losses.

Assume, for example, that *X* makes a small capital contribution but spends most of his time conducting the affairs of the business. *Y* contributes most of the capital but spends little time in the business. Assume further that *X* receives a salary of $2,500 per year and *Y* receives none. Under these conditions *X*'s salary would be considered a distribution of profits to be made to *X* because of his service contribution. The entry necessary to record the salary would be as follows:

Salaries	2,500	
X salary		2,500

The expense account salaries is closed into the summary profit and loss account. In the profit and loss statement it should be shown as a disposition of profit.[1] If the salary is paid, it is

[1] There may be conditions under which it seems advisable to treat salaries as an operating expense. When a partnership contains numerous partners and when an active member has a small investment and receives a salary, his position may be comparable to that of an employee. Under these conditions his salary should be treated as an operating expense. For a more extended treatment see W. A. Paton, "Essentials of Accounting," pp. 622–623, The Macmillan Company, New York, 1938.

settled in the same way as is any other liability; if it is not paid, it is transferred to *X*'s capital account.

Similarly interest allowed on capital is a method of adjusting unequal capital contributions. The interest may be computed on capital balances at the beginning of the fiscal period, at the end of the fiscal period, or on the average amount. The last method, of course, is the most accurate since it considers changes of both amount and time. The principal steps required to compute the average capital investment of a partner are as follows:

1. The investment balance at the beginning of the period is multiplied by the number of months it has remained unchanged.
2. When a change in the investment occurs, the new balance is multiplied by the number of months it remains unchanged.
3. This procedure is repeated for each change in capital throughout the entire fiscal period.
4. The amounts, in month-dollars,[1] are totaled and divided by the number of months covered by the averaging process. The result is the average capital balance.

Assume, for example, that the accounts of the two partners, *X* and *Y*, appear as follows:

X CAPITAL

		Mar. 1 Balance	2,000

X PERSONAL

May 1	500	Aug. 1	500

Y CAPITAL

		Mar. 1 Balance	20,000

Y PERSONAL

June 1	1,000	Oct. 1	5,000
Dec. 1	500		

[1] This computation may also be made in day-dollars. When this is done, the respective capital balances are multiplied by the number of days the balance remains unchanged. The total, in day-dollars, is divided by the total days covered by the averaging process.

The computations necessary to obtain the average capital balance of each partner[1] for the period from March 1 to December 31 are as follows:

X

From March 1 to May 1	$\$2{,}000 \times 2 =$	4,000 month-dollars
From May 1 to August 1	$1{,}500 \times 3 =$	4,500 month-dollars
From August 1 to December 31	$2{,}000 \times 5 =$	10,000 month-dollars
Total		18,500

$$\text{Average investment of } X = \frac{18{,}500}{10} = \$1{,}850$$

Y

From March 1 to June 1	$\$20{,}000 \times 3 =$	60,000 month-dollars
From June 1 to October 1	$19{,}000 \times 4 =$	76,000 month-dollars
From October 1 to December 1	$24{,}000 \times 2 =$	48,000 month-dollars
From December 1 to December 31	$23{,}500 \times 1 =$	23,500 month-dollars
		207,500

$$\text{Average investment of } Y = \frac{207{,}500}{10} = \$20{,}750$$

Interest on \$1,850 at 6 per cent for 10 months	\$ 92.50
Interest on \$20,750 at 6 per cent for 10 months	1,037.50
Total	\$1,130.00

Assuming that the profit for the period amounts to \$3,500 and that all profits or losses are to be distributed equally between the partners after salary and interest allowances are considered, then the following entries would be made:

To distribute *X*'s salary

Administrative salaries	2,500	
X personal		2,500

To distribute the interest on capital

Interest on partners' capital	1,130.00	
X personal		92.50
Y personal		1,037.50

To complete the distribution between the partners

X personal	65	
Y personal	65	
Profit and loss		130

[1] If partnership profits are distributed in proportion to average capital investments, this method may be used for determining the average of each capital account. For example, in the illustration used, *X*'s total month-dollars amount to 18,500, *B*'s to 207,500, the total to 226,500. *A*'s profit-sharing ratio would be 18,500/226,500 and *B*'s would be 207,500/226,500.

Thus, when a combination of methods is used, the final distribution of a profit may require a charge to the partners' accounts to adjust them properly.

Dissolution.—The third phase of partnership accounting to be considered is dissolution. It has been defined as "the change in the relation of the partners caused by any partner ceasing to be associated in the carrying on as distinguished from the winding up of the business. On dissolution the partnership is not terminated, but continues until the winding up of partnership affairs is completed."[1]

The Uniform Partnership Act lists the following causes for dissolution:

1. Without violation of the agreement between the partners.

   (*A*) By the termination of the definite term or particular undertaking specified in the agreement,

   (*B*) By the express will of any partner when no definite term or particular undertaking is specified,

   (*C*) By the express will of all the partners who have not assigned their interests or suffered them to be charged for their separate debts, either before or after the termination of any specified term or particular undertaking,

   (*D*) By the expulsion of any partner from the business bona fide in accordance with such a power conferred by the agreement between the partners,

2. In contravention of the agreement between the partners, where the circumstances do not permit a dissolution under any other provision of this section, by the express will of any partner at any time;
3. By any event which makes it unlawful for the business of the partnership to be carried on or for the members to carry it on in partnership;
4. By the death of any partner;
5. By the bankruptcy of any partner or the partnership;
6. By decree of the court. On application by or for a partner the court shall decree a dissolution whenever:

   (*A*) A partner has been declared a lunatic in any judicial proceeding or is shown to be of unsound mind,

   (*B*) A partner becomes in any other way incapable of performing his part of the partnership contract,

[1] Uniform Partnership Act, Part VI, Secs. 29, 30.

(*C*) A partner has been guilty of such conduct as tends to affect prejudicially the carrying on of the business,
(*D*) A partner wilfully or persistently commits a breach of the partnership agreement, or otherwise so conducts himself in matters relating to the partnership business that it is not reasonably practicable to carry on the business in partnership with him,
(*E*) The business of the partnership can only be carried on at a loss,
(*F*) Other circumstances render a dissolution equitable.

Dissolution is to be distinguished from the termination of a partnership. When a partner ceases to be associated with the organization but the firm continues to function with a changed membership, the problem of dissolution is to determine the equity of the retiring partner. This may involve a revaluation of assets and usually requires a distribution of the profit or loss for the time elapsing from the close of the last fiscal period to the date of the partner's retirement.

When a partnership interest is withdrawn at its book value, the accounting treatment is simple. Assume that the partnership equities of *R*, *S*, and *T* are correctly shown by the following statement:

Sundry assets	$27,500	*R* capital	$15,000
		S capital	7,500
		T capital	5,000
	$27,500		$27,500

Assume further that *T* upon retiring from the firm is paid $5,000 for his equity and that *R* and *S* continue the partnership. The retirement is recorded by the following entry:

T capital	5,000	
Cash		5,000

If, however, *T* receives $6,000 for his interest and if goodwill exists, his withdrawal from the firm may be recorded as follows:

Goodwill	1,000	
T capital	5,000	
Cash		6,000

In this case goodwill is an asset turned over by the old partnership to the new.

If it is undesirable to place it on the books, the payment to *T* may be first recorded as follows:

T capital	6,000	
Cash		6,000

Then the $1,000 debit balance in *T*'s capital account would be treated as a bonus to *T* to be borne by *R* and *S* in proportion to their profit-and-loss-sharing ratios. If profits and losses are shared equally, the entry would be recorded as follows:

R capital	500	
S capital	500	
T capital		1,000

If conditions within the partnership are such that *T* is willing to accept $4,000 for his equity, the cash payment to him would be recorded by the following entry:

T capital	4,000	
Cash		4,000

The remaining balance in *T*'s account would then be apportioned to *R* and *S*, if they share profits equally, in the following manner:

T capital	1,000	
R capital		500
S capital		500

Liquidation.—When dissoluton is accompanied by liquidation, the affairs of the partnership are terminated and the books are closed. After the firm's debts are paid and the partnership assets are converted into cash, the procedure for the distribution of assets is as follows:

1. Distribute all profits or losses arising from operations or from liquidation
2. Distribute cash to each partner for the amount of his equity as shown by his capital account

The proceeds from liquidation may be distributed among the partners by a single payment, or the payments may be distributed by installments. To better explain the procedure followed when liquidation has been effected by a single payment, assume the conditions of the following illustration.

BALANCE SHEET OF *A*, *B*, AND *C*

Cash	$ 500	*A* capital	$15,000
Sundry assets	24,500	*B* capital	7,000
		C capital	3,000
	$25,000		$25,000

Assume further, that the partners share profits and losses in the following ratios: *A*, 50 per cent; *B*, 25 per cent; and *C*, 25 per cent. Assets other than cash are liquidated for $11,500. This, when added to the $500 in the balance sheet, amounts to $12,000 available for payment to the partners. Hence the loss from liquidation is $13,000.

This loss together with the distribution of assets may be shown as follows:

	Capital	Share of Loss	Payment
A	$15,000	$ 6,500	$ 8,500
B	7,000	3,250	3,750
C	3,000	3,250	−250
Total	$25,000	$13,000	$12,000

If *C* pays the $250 owed to the firm, *A* and *B* will receive the amounts indicated in the table. If, however, *C* is unable or unwilling to pay this amount, the $250 will be treated as a loss and divided between *A* and *B* in proportion to their adjusted profit-and-loss ratios. In this event *C* no longer shares profits or losses, and the adjusted ratio for *A* is 66⅔ (50 per cent of the changed total, 75 per cent, instead of 100 per cent), and for *B* is 33⅓ (25 per cent of the changed total, 75 per cent). The distribution of *C*'s deficiency may be shown in the following tabular form:

	Capital	Loss	Assets	*C*'s Deficiency	Payment
A	$15,000.00	$ 6,500.00	$ 8,500.00	$166.67	$ 8,333.33
B	7,000.00	3,250.00	3,750.00	83.33	3,666.67
C	3,000.00	3,250.00	−250.00		
Total	$25,000.00	$13,000.00	$12,000.00	$250.00	$12,000.00

The journal entry necessary to show the realization of cash from the assets sold is

Cash	11,500	
Sundry assets		11,500

To distribute the loss from liquidation

A capital	6,500	
B capital	3,250	
C capital	3,250	
Sundry assets		13,000

If *C* pays his capital deficiency,

Cash	250	
C capital		250

Cash would then be distributed between the partners as follows:

A capital	8,500	
B capital	3,750	
Cash		12,250

If *C* did not pay his capital deficiency of $250, this amount would be distributed between *A* and *B* as follows:

A capital	166.67	
B capital	83.33	
C capital		250.00

The final payment of cash available for distribution (if *C* did not make the payment of $250) would be

A capital	8,333.33	
B capital	3,666.67	
Cash		12,000.00

Liquidation by Installments.—Distribution of partnership assets by installments presents a difficulty not found when liquidation is accomplished by a single payment. Distribution of installment proceeds should be made in such a manner as to avoid overpaying a partner at any time. This difficulty arises when the profit-and-loss-sharing ratio differs from the ratio of the partners' capital contributions.

Suppose, for example, that the balance sheet of *X*, *Y*, and *Z* is as follows:

Assets	$30,000	*X* capital	$ 5,000
		Y capital	8,000
		Z capital	17,000
	$30,000		$30,000

Profits and losses are shared equally. Assets are realized in the following order:

Installment 1	$ 6,000
Installment 2	9,000
Installment 3 (final)	12,000
	$27,000

In order to avoid overpaying a partner, the distribution of installment proceeds is made on the assumption that all assets may be lost. Thus, the possible loss after realizing the first installment of $6,000 is $24,000 ($30,000 − $6,000).

The distribution of the first installment may be shown as follows:

	Capital	Possible Loss	Share of Installment	Distribution of Capital Deficiencies	Payment
X	$ 5,000	$ 8,000	−$3,000		0
Y	8,000	8,000	0		0
Z	17,000	8,000	9,000	$3,000	$6,000
Total	$30,000	$24,000	$6,000	$3,000	$6,000

Since *X*'s capital investment is exceeded by his share of the possible loss, he receives no portion of the installment—otherwise he would be overpaid. His capital deficiency (the excess of the possible loss over his capital) cannot be distributed between *Y* and *Z*, since *Y*'s possible loss is equal to his capital investment. Therefore, the total amount of the installment is paid to *Z*, and *X*'s deficiency is set against the excess of *Z*'s capital over his possible loss.

The second installment would be distributed as follows:

	Capital	Possible Loss	Share of Installment	Payment
X	$ 5,000	$ 5,000	0	0
Y	8,000	5,000	$3,000	$3,000
Z	11,000	5,000	6,000	6,000
Total	$24,000	$15,000	$9,000	$9,000

The final payment would be apportioned in the following manner:

	Capital	Loss	Payment
X	$ 5,000	$1,000	$ 4,000
Y	5,000	1,000	4,000
Z	5,000	1,000	4,000
Total	$15,000	$3,000	$12,000

In journal form, the distribution of the three installments would be recorded as follows:

Cash	6,000	
Sundry assets		6,000
To record the receipt of cash available for the payment of installment 1		
Z capital	6,000	
Cash		6,000
To record the distribution of installment 1		
Cash	9,000	
Sundry assets		9,000
To record the receipt of cash available for the payment of installment 2		
Y capital	3,000	
Z capital	6,000	
Cash		9,000
To record the distribution of installment 2		
Cash	12,000	
Sundry assets		12,000
To record the receipt of cash available for the payment of installment 3		
Loss from liquidation	3,000	
Sundry assets		3,000
To record the loss from liquidation		
X capital	1,000	
Y capital	1,000	
Z capital	1,000	
Loss from liquidation		3,000
To distribute the loss from liquidation		
X capital	4,000	
Y capital	4,000	
Z capital	4,000	
Cash		12,000
To record the payment of the final installment		

Questions

Review.

1. In what respects is the individual proprietorship superior to the partnership or the corporation?
2. Wherein is the partnership form of organization preferable to the sole proprietorship? To the corporation?
3. Are articles of partnership essential to the operation of a partnership? Are they advisable? Why?
4. Enumerate important points to be included in the articles of partnership.
5. Distinguish between a share in the profits and a share in the business of a partnership. Why is this distinction important?
6. Distinguish between the function of the partners' capital accounts and of their personal accounts.
7. Argue in defense of treating salaries and interest on capital balances of the partners as a distribution of profit.
8. In the absence of any agreement among the partners, how are profits and losses distributed among them?
9. Distinguish between dissolution and liquidation.
10. Enumerate the principal causes for dissolution.
11. In what order should claims to the assets of the partnership be paid in the event of liquidation?
12. What is the basis for the distribution of assets among the partners upon liquidation?

Discussion.

13. What type of a record is made on the books of a partnership when the equity of a partner is bought

    a. By a new partner
    b. By an existing member of the firm
    c. From firm funds

14. *A* and *B* are partners sharing profits and losses equally, with capital account balances of $10,000 and $7,500, respectively. *C* is admitted to a one-third interest in the partnership by a payment of $5,000. What entry should be made if

    a. *A* and *B* are willing to admit *C* for this amount because they feel that his presence in the business is worth the difference between what he pays and the book value of the share acquired.
    b. *C* is admitted at this figure solely because the firm needs cash.

    If *C* paid $12,000 for a one-third interest, what entry would be made

    a. If goodwill is recorded
    b. If goodwill is not recorded

Suggested Supplementary Readings

FINNEY, H. A.: "Introduction to Principles of Accounting," Chaps. 16 and 17, Prentice-Hall, Inc., New York, 1938.

HATFIELD, H. R., "Accounting," Chaps. 19 and 20, D. Appleton-Century Company, Inc., New York, 1927.

HUSBAND, G. R., and O. E. THOMAS: "Principles of Accounting," Chaps. 19–21, Houghton Mifflin Company, Boston, 1935.

MACFARLAND, G. A., and R. D. AYARS: "Accounting Fundamentals," Chaps. 21 and 22, McGraw-Hill Book Company, Inc., New York, 1936.

MCKINSEY, J. O., and H. S. NOBLE: "Accounting Principles," Chaps. 16 and 17, South-Western Publishing Company, Cincinnati, 1939.

PATON, W. A.: "Essentials of Accounting," Chaps. 31 and 32, The Macmillan Company, New York, 1938.

CHAPTER XI

CORPORATIONS

Many of the accounting problems of corporations, like those of individual proprietorship and partnerships, are directly concerned with the proper valuation of net worth. There is considerable difference, however, between the net worth of a sole proprietorship or a partnership and that of a corporation. This distinction lies in the fact that the corporation, unlike the other two organizations, is a legal entity, a being quite apart from those who own or manage it. The corporation entity owns the assets of the business, and the stockholders in turn own the corporation.

Corporate Proprietorship.—The proprietorship of the corporation consists of the outstanding capital stock and surplus. The former represents the investment of the stockholder, an interest which cannot be withdrawn at will. It may properly be considered as a protection to the creditors, for in the event of liquidation all creditors' claims are settled before any portion of the stockholder's investment is returned to him.

Surplus, the other portion of corporate proprietorship, is measured by the excess of assets over the sum of liabilities and capital stock of the corporation. Unlike capital stock the investment in surplus may, under conditions to be discussed later, be withdrawn from the corporation and distributed among the stockholders.

Definition.—Among the many definitions of corporations, that of Chief Justice Marshall[1] is frequently cited.

A corporation is an artificial being, invisible, intangible, and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are supposed best calculated to effect the object for which it was created. Among the most important are immortality, and, if the expression may be allowed, individuality; properties, by which a per-

[1] *Dartmouth College* v. *Woodward*, 4 Wheat. (U. S.) 518, 636, 4L. ed. 629.

petual succession of many persons are considered as the same, and may act as a single individual. They enable a corporation to manage its own affairs, and to hold property, without the perplexing intricacies, the hazardous and endless necessity, of perpetual conveyances for the purpose of transmitting it from hand to hand. It is chiefly for the purpose of clothing bodies of men, in succession, with these qualities and capacities, that corporations were invented, and are in use. By these means, a perpetual succession of individuals are capable of acting for the promotion of the particular object, like one immortal being.

Important characteristics to be noted in the corporation are its limited liability, its continuity of organization, and its adaptability to the requirements of large-scale operations.

When Desirable as a Form of Organization.—Probably the greatest advantage of the corporate organization over the sole proprietorship or partnership is that of limited liability. In both the individual proprietorship and the partnership the personal property of the owners can be used for the satisfaction of business debts. Ordinarily, in the event of failure, the stockholder of a corporation does not lose more than the par, or nominal, value of his stock. Stockholders in bank, insurance, or other fiduciary concerns are frequently liable for twice this amount, and in some cases this liability has been placed at three times the par value of the stock. The purpose of this extra precaution is to afford additional protection to creditors when the enterprise occupies a position of public trust.

Another important feature of the corporation is its continuity of existence. The individual proprietorship and the partnership terminate upon the death or retirement of a member, but the life of the corporation is not affected by the incapacity of a stockholder. For certain types of enterprises (banks, railroads, and insurance companies, for example) this may be of great significance.

The fact that the interests of stockholders can be transferred with greater ease than in either a sole proprietorship or partnership makes the corporation especially adaptable to large-sized enterprises. Furthermore the lack of restrictions upon the number of stockholders facilitates raising large amounts of capital.

In still another respect the corporation is well suited to large-scale industry: it is especially adapted to functionalized management. Ownership in the corporation is vested in the stockholders,

who elect a board of directors charged with the responsibility of management. The directors elect officers, who in turn employ others. The general policies formulated by the board are executed under the direction of the corporate executives. Under this form of control it is possible to secure the services of men best fitted for the required tasks.

Steps in the Formation of a Corporation.—The scope of the functions that may be exercised by the management depends largely upon the statutory law of the state in which the enterprise is incorporated. Since these laws vary considerably, it is quite common for an enterprise to incorporate in a state which grants liberal rights and powers and to carry on most of its business in other states. After selecting the state in which the enterprise is to be incorporated, the principal steps to be taken in its formation are as follows:

1. The incorporators draft a charter in accordance with the state regulations. In this, such data as the name of the business, its location, its purpose, the nature of its capitalization, the names and addresses of subscribers, and the names and addresses of directors chosen previous to the first annual meeting of the stockholders are included. This application, accompanied by the necessary fees, is sent to the proper state officer, usually the Secretary of State.
2. If the application is approved, the official charter or articles of incorporation are returned to the incorporators. Copies are filed in the proper state offices.
3. The stockholders hold a meeting for the acceptance of the charter and the formulation and adoption of the bylaws (regulations governing internal management of the corporation).
4. A directors' meeting is held, at which time a president, vice-president, secretary, and treasurer are chosen, and arrangements are made for initiating the affairs of the enterprise.

Distinctive Corporate Records.—If the corporation is of sufficient size, the ordinary accounting books used by the sole proprietorship or partnership may be inadequate. The corporation may need special records to care for its requirements.[1]

[1] This section conveys only a general impression of distinctive corporate

Among these distinctive records is the *minute book.* It is a memoranda record of stockholders' and directors' meetings, particularly valuable for accounting purposes because it presents a history of the corporation, resolutions passed and actions taken. Frequently it furnishes the authority for journal entries relating to the declaration and payment of dividends, the issue of stocks or bonds, and other matters requiring action of the board of directors. Furthermore, from the data in the minute book, one is able to determine the legality of actions taken by the directors, *i.e.*, whether they are in accordance with the corporate charter and the bylaws.

For the most part other books peculiar to the corporation consist of those required for keeping suitable records of stockholders' interests. If the stock is sold widely by subscription, a *subscription journal* is often used. This is a special journal in which data relating to the stock subscriptions are recorded. Appropriate rulings include provisions for the date of subscription, the name of the subscriber, the amount subscribed, and the terms of purchase. Summary postings are made to the control account subscribers in the general ledger, and daily postings are made to the accounts of the individual subscribers.

The subscribers controlling account in the general ledger is supported by the *subscription ledger* which contains an account for each subscriber to the capital stock of the corporation. The individual subscribers' accounts are ruled much the same as is the ordinary ledger account. Space is provided for the date of the transaction, the number of shares subscribed, the purchase price and par value of the stock, and the date and amount of payments.

When the subscriptions are paid and the stock is issued, if the volume of such transactions warrant, a *stock certificate book* may be used. This special journal contains pertinent data relating to the issue of the stock; essentially it records the receipt of cash and the issue of the stock. Postings, by totals, are made from this journal to the controlling account capital stock, and daily postings are made to the individual stockholder's account. These accounts appear in the *capital stock ledger* as subsidiary to the controlling account capital stock. Each account shows the

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records. Discussion in greater detail may be found in the accounting texts listed at the end of this chapter.

date of issue, the number of shares owned, the par value, and the purchase price of the stock.

Among the other special books frequently used, the *stock transfer book* shows data relating to the transfer of shares, the date of transfer, the serial number of the stock exchanged, and the date of exchange.

Sale of Stock for Cash.—Ordinarily, the first transaction to be recorded is the sale of capital stock. If we assume that the corporation is organized with a capitalization of 1,000 shares of stock, par value $100, and that each of the three organizers, *A*, *B*, and *C* buys 250 shares for cash, this would be journalized as follows:

Cash....................................	75,000	
Capital stock............................		75,000

If it is desired to show the amount and nature of the capitalization, this may be accomplished by a dated memoranda in the journal similar to the following:

The ______ Corporation, organized under the laws of Pennsylvania, received its charter dated as of ______ The authorized capital stock consists of 1,000 shares of common stock, par value $100.

Or, if a memoranda in the journal is not considered sufficient, the data may be entered in the ledger with this entry:

Capital stock unissued..................	100,000	
Capital stock authorized................		100,000

Despite the fact that this entry appears in the ledger, it has little more significance than a memoranda item. The account capital stock unissued merely indicates that the corporation has the right to issue stock to the amount shown in the account. Unissued capital stock can never be properly considered an asset. The account capital stock authorized is likewise a memoranda account and cannot be considered part of proprietorship since no investment has been made.

When the stock is sold and certificates are issued, the following entry is made:

Cash....................................	75,000	
Capital stock unissued..................		75,000

After this entry has been posted, these account balances will appear in the net worth section of the balance sheet as follows:

Capital stock:		
Authorized	$100,000	
Less unissued	25,000	
Issued and outstanding		$75,000

Premium and Discount.—When the stock is sold at more or less than its par value, this fact must be noted in the accounts, since the law specifies that if the capital stock has a par value, it must be shown in the account figures. The usual procedure is to record any excess over par to an account premium on stock and to record any amount less than par in an account discount on stock. If, for example, *D* bought 10 shares of stock at 103 and *E* bought 10 shares at 98, *D*'s purchase would be recorded as follows:

Cash	1,030	
Premium on stock		30
Capital stock		1,000

E's purchase would be recorded:

Cash	980	
Discount on stock	20	
Capital stock		1,000

In the balance sheet, premium on stock is an addition to, and discount on stock a deduction from, the par value of capital stock outstanding.

Subscriptions.—If subscriptions to capital stock are taken and payments are made later, a record is made of the claims against the subscribers. In order to illustrate this, assume that *F* subscribes for 20 shares of stock at 90 and pays for the subscription one month later. This will be recorded as follows:

Subscribers (*F*)	1,800	
Discount on stock	200	
Capital stock subscriptions		2,000

The subscriber's account is an asset, a claim for the amount he has agreed to pay. This claim should, of course, be stated at the amount collectible from him if the stock is sold at a price other than par. In the event of bankruptcy the subscriber is liable for an amount equal to the par value of the stock if it has been sold at a discount.

The capital stock subscription account is an item of proprietorship, of temporary status, pending the payment of the subscrip-

tion, at which time the proprietorship is changed to one of a more permanent character. The following entry shows the payment of the subscription:

Cash	1,800	
Subscribers (*F*)		1,800

The entry to show the issue of stock is

Capital stock subscriptions	2,000	
Capital stock		2,000

Installment Subscriptions.—The subscription agreement may permit the subscriber to pay for stock by installments. Assume that *G* subscribes for 50 shares of stock at par on March 1 and that half is to be paid when the subscription is taken, the balance to be paid in two equal monthly installments due April 1 and May 1. On March 1 the initial payment and the balance to be paid will be recorded by the following entry:

Cash	2,500	
Subscribers (*G*)	2,500	
Capital stock subscriptions		5,000

When the notice of the first installment is given, the following entry will be made:

Installment 1	1,250	
Subscribers		1,250

When the first installment is paid, it is recorded as follows:

Cash	1,250	
Installment 1		1,250

The notice of the second installment and its subsequent payment would be similarly recorded.

The installment account has the same status as that of the subscriber's account, *i.e.*, it is an asset, a claim against individuals for amounts due the corporation. When the subscriptions are fully paid and the stock certificates are issued, the following entry is made:

Capital stock subscriptions	5,000	
Capital stock		5,000

Defaulted Subscriptions.—When a subscriber fails to sustain the terms of his subscription agreement and defaults in his pay-

ments, the corporation still has a claim. Some states permit it to retain all that has been paid in; others require that the stock be sold and that any amount realized in excess of the corporation's equity be returned to the defaulting stockholder. To illustrate the necessary entries, assume that *J* subscribed for two shares of stock at par to be paid in two equal installments. The first payment was made but the second was defaulted. The entry to record the subscription would be as follows:

Subscribers (*J*)	200	
Capital stock subscriptions		200

The initial payment would be recorded as follows:

Cash	100	
Subscribers (*J*)		100

If the corporation retained all that had been paid in, the entry would be as follows:

Capital stock subscriptions	200	
Subscribers (*J*)		100
Surplus from forfeited subscriptions		100

By this entry the capital stock subscription and the subscriber's account are cleared. The account surplus from forfeited subscriptions is an item of capital surplus (see page 172), to be considered as a permanent investment comparable to capital stock. It should not be treated in the same manner as earned surplus available for distribution among stockholders.

If the stock is sold on the market at 95 and the amount realized in excess of the corporation's equity is returned to the defaulting subscriber, the entry will be

Cash	190	
Subscribers (*J*)	10	
Capital stock		200

The discount is, of course, an item chargeable to *J*. In order to show the settlement by cash of the defaulted subscription, the following entry should be made:

Capital stock subscriptions	200	
Subscribers (*J*)		110
Cash		90

Within the limits permitted by law, the corporation may determine its own policy. It might, for example, issue stock equal in

value to the payments received. In the case under discussion, *J* would then receive one share of stock and the balance of his subscription would be canceled. Again, it might be the policy of the corporation, as a matter of maintaining good public relations, to return all the payments that had been made.

Treasury Stock.—In one respect the accounting treatment of defaulted stock is similar to that of stock acquired by the corporation either through purchase or donation. Ordinarily any surplus arising from either transaction is an item of capital surplus (see page 172).[1]

Treasury stock may be defined as those shares of the corporation which after issue have been reacquired through purchase or donation and which are held in the company's treasury. It is similar to unissued stock in that both are shown in the balance sheet as a deduction from capital stock authorized. Outstanding capital stock is the amount in the hands of stockholders; hence any stock reacquired constitutes a retirement of the outstanding stock. Like unissued stock, treasury stock is a means of raising capital, not an asset.

If unissued stock is sold at a discount, the purchaser may, in the event of failure, lose not only what he has paid in but he may also be required to pay the amount of the discount. If treasury stock is sold below par, however, it is generally considered to be fully paid and nonassessable and the purchaser incurs no subsequent liability for the discount.[2]

In order to illustrate the accounting procedure for treasury stock, suppose that a corporation with outstanding capital stock of $100,000 received a donation of 100 shares (par 100) from its stockholders for the purpose of raising working capital.

[1] In some states the accounting treatment of treasury stock is influenced by legal restrictions. For example, in California a corporation which purchases its own stock is required by law to charge the purchase price of the stock to earned surplus.

[2] This is the common interpretation. Hatfield questions its accuracy. His argument is as follows: "This, however, is probably incorrect except where the stock has been donated to the corporation. Thus, if stock issued at par was reacquired by the corporation at 90, to sell it at less than 90 would work an actual reduction of the contributed capital. If sold at 90 or above the protection which the creditors of the company have a right to assume will be fully maintained." Hatfield, H. R., "Accounting," p. 183, D. Appleton-Century Company, Inc., New York, 1927.

This transaction is journalized by the following entry:

Treasury stock	10,000	
Donated surplus		10,000

The net worth section of the balance sheet would then appear as follows:

Capital stock authorized	$100,000	
Less treasury stock	10,000	
Capital stock outstanding		$ 90,000
Donated surplus		10,000
		$100,000

If, now, the treasury stock cannot be sold at par but instead is sold at 95, this will be recorded as follows:

Cash	9,500	
Donated surplus	500	
Treasury stock		10,000

In a somewhat similar manner, capital surplus may arise if the corporation purchases its own stock. Assume that a corporation buys 25 shares of its own stock at 95. This is journalized as follows:

Treasury stock	2,500	
Surplus from the purchase of treasury stock		125
Cash		2,375

If the stock is later sold at 105, the following entry will be made:

Cash	2,625	
Surplus from the sale of treasury stock		125
Treasury stock		2,500

In each case the surplus in question is capital surplus, and it arises because of the difference between the par value of the stock and the price paid or received for it.

No-par Stock.—So far the discussion has been limited to stock having a par value. Beginning with New York in 1912, most states have enacted laws which now permit corporations to issue stock without par value.

It was thought by those proposing the change that the removal of nominal valuations on corporate shares would better reflect true values than par value stock, because it would remove any implication, in the minds of investors, that a share of stock was

worth its par value. This expectation has not been realized for the devise of no-par stock has failed to curb the ingenuity of promoters and managers in issuing "watered stock."[1]

In general, when no-par stock is sold, whatever amount is received from the stockholder is usually carried directly to the capital stock account. This simplifies the accounting procedure in that it eliminates the necessity for stock discount and premium accounts. For example, if a corporation sells 1,000 shares of no-par stock at 45, the entry to record this will be

Cash	45,000	
Capital stock common, no par		45,000

The laws of some states permit or require the board of directors to specify a stated value for no par stock. This introduces slight difficulty since the accounting procedure is similar to that of par value stock. If, for example, the stated value on the stock in the previous illustration amounted to $40, the entry to record the sale of the stock would be

Cash	45,000	
Paid-in surplus		5,000
Capital stock		40,000

Common and Preferred Stock.—The discussion so far has been concerned only with common stock. There are, of course, numerous types of stocks classified in various ways. The most usual as well as the most important divisions are common and preferred. *Common stock* is the ordinary stock of the corporation. Its holders assume the greatest risk in the event of failure; their income return is a residual one in that the claims of creditors and stockholders having prior rights must first be satisfied; and, finally, it is ordinarily only the common stockholders who have the right to vote.

Preferred stock usually carries a prior claim on the assets of the corporation in the event of failure; it generally carries a prior right to dividends before distribution is made to common stockholders; and only in unusual cases do the holders of preferred

[1] The term "watered stock" is frequently used in financial parlance. Its meaning is not always clear. The evil in its use, however, lies in the fact that asset values are overstated. For example, if capital stock is issued to the amount of $500,000 in payment of factory property actually worth only $400,000, the stock has been "watered," or falsely stated, to the amount of $100,000.

stock vote. In general the differences between common and preferred stocks are specified by law or in the certificate of the preferred stock.[1]

The accounting procedure for different types of stock does not vary greatly. The primary consideration is to identify each type of stock by means of proper account titles and to separate carefully all entries relating to each class of stock from those of others.

Bonds.—Despite the fact that legally, preferred stock is an equity of ownership, practically it is similar to bonds as an instrument of borrowing. As previously defined (see page 16), a bond is a formal written promise, under seal, to pay a definite amount, with interest, at some determinable future date. Bonds are often used in preference to preferred stock because the issuing corporation is able to secure funds at a lower rate of interest, since the investors believe they are accepting a correspondingly lower risk.

No attempt will be made to enumerate the multiplicity of types. The general accounting procedure for bonds is the same, regardless of type. Care should be taken, however, to keep all entries relating to a given issue distinct from those of other issues.

One frequently used method of classifying bonds is to place them into two groups according to the type of security and according to the method of paying interest. They may be secured by specific physical properties, as a general first-mortgage bond; they may be secured by pledging other securities as a collateral trust bond; and, finally, they may have no specific security other than the promise of the issuing corporation as, for example, debenture bonds.

[1] Among the different types of preferred stock, the following are especially important: *cumulative*—before dividends can be paid to the common stockholders not only the current dividend must be paid to the preferred stockholders but also all dividends in arrears; *noncumulative*—if dividends are not paid for the current year, the corporation is under no obligation to ever pay them; *participating*—if the stock is participating preferred, it shares with common stock in any extra amount of dividends paid after the common stock has received a dividend equal to that paid the preferred stockholder; *convertible*—preferred stockholders may, under the terms of the agreement with the corporation, convert their preferred stock, if they wish, into common stock of the corporation, or, in rarer cases, into corporate bonds.

On the basis of the method of paying, bonds are usually classified as registered and coupon. A registered bond is recorded in the name of the owner, and the interest and principal is paid to the owner of record. In contrast the interest and principal on coupon bonds are paid to whoever presents the properly dated coupons.[1]

The principal accounting entries for bonds may be illustrated by assuming an issue authorized for $100,000, with arrangements made to market them through an investment banker. The authorization of the bonds may be recorded by the following entry:

Unissued general first mortgage 5 per cent bonds	100,000	
General first mortgage 5 per cent bonds authorized		100,000

If the entire issue was sold outright to an investment banker and his firm assumed the responsibility for marketing the obligations, the following entry would be made upon delivery of the bonds to the investment house:

Investment bank	100,000	
Unissued general first mortgage 5 per cent bonds		100,000

If the bonds are sold to the banker at par, the following entry will be made upon receipt of cash:

Cash	100,000	
Investment bank		100,000

Following this an entry will then be made to recognize the bonds outstanding:

General first mortgage 5 per cent bonds authorized	100,000	
General first mortgage 5 per cent bonds outstanding		100,000

Instead of handling the securities through an investment banker, the issuing corporation may sell its bonds directly to

[1] For an extended discussion of the many types of bonds, see A. S. Dewing, "Financial Policy of Corporations," Chaps. 4–8, The Ronald Press Company, New York, 1926.

the public. If, in this event, *A* subscribed to $20,000 worth of bonds at 95, this would be recorded as follows:

Bond subscriber (*A*)	19,000	
Discount of general first mortgage 5 per cent bonds	1,000	
General first mortgage 5 per cent bond subscriptions		20,000

When the bonds are fully paid by *A*, the following entry will be made:

Cash	19,000	
Bond subscriber (*A*)		19,000

Delivery of the bonds to *A* will be designated by the following entry:

General first mortgage 5 per cent bond subscriptions	20,000	
General first mortgage 5 per cent bonds outstanding		20,000

To illustrate the sale of bonds at a premium, assume that $10,000 worth are sold to *B* at 105. The entry to record the cash sale will be

Cash	10,500	
Premium on general first mortgage 5 per cent bonds		500
General first mortgage 5 per cent bonds outstanding		10,000

Bond Interest.—The discount and premium on bonds must be considered in computing the interest cost. Bond premium or discount arises because the nominal or stated rate of interest in the bond does not agree with the market rate which investors place on the risk. If an issue of $100,000, 20-year 4 per cent bonds brings only $80,000 when sold, the investors have evaluated the risk at 5 per cent.[1]

Despite the fact that the corporation received only $80,000, it will have to pay $100,000 to the bondholders at the end of 20 years. The $20,000 difference between the par value of the issue and the amount realized may properly be considered part of the interest cost, incurred because the rate stated in the bond was too low. It should be apportioned or amortized over the life of the issue to determine the annual addition to the amount of interest

[1] An annual yield of $4,000 (4 per cent of $100,000) divided by $80,000, the amount actually invested, results in a return of 5 per cent.

paid to the bondholders.[1] The entry to record the issue of bonds in the illustration under discussion would be

Cash	80,000	
Discount on bonds outstanding	20,000	
Bonds outstanding		100,000

If interest is paid semiannually, the current interest payment and the proper amount (one-fortieth, on a semiannual basis) of bond discount may be apportioned to the period by the following entry:

Bond interest	2,500	
Discount on bonds outstanding		500
Cash		2,000

Similar entries will be made every six months until the end of the 20-year period. When the bonds mature, if they are retired at par, the following entry will be made:

Bonds outstanding	100,000	
Cash		100,000

Similarly, if the bonds are sold at a premium, the premium is amortized over the life span of the bond and subtracted from the current interest charge. If, for example, the bonds under discussion sold for 110, the sale would be recorded as follows:

Cash	110,000	
Bond premium		10,000
Bonds outstanding		100,000

The semiannual interest charge may be journalized in the following manner:

Bond interest	1,750	
Bond premium	250	
Cash		2,000

In the balance sheet, bond premium or discount is an addition to or a deduction from the maturity value of the bonds. The liability for the bonds, while shown at the maturity or legal value, carries an adjustment to this amount equal to the premium or discount.

Profit Distribution.—Corporate earnings are distributed to stockholders by the declaration and payment of dividends. The

[1] In order to simplify the explanation, compound interest has been ignored.

term "dividends" is used in various ways. It may refer to the rate at which the distribution of profit is made to stockholders, to the payment received by the stockholders, or to the amount owed by the corporation to the stockholders.

Once declared, dividends become a liability of the corporation. If, for example, the directors declared dividends at the rate of 5 per cent on 1,500 shares (par $100) of common stock, this would be journalized as follows:

Surplus	7,500	
Dividends payable (common)		7,500

While the charge for dividends is ordinarily made to surplus, it is sometimes made to profit and loss.

Upon payment of the liability in cash, the following entry would be made:

Dividends payable (common)	7,500	
Cash		7,500

It should be noted that there are two distinct problems presented by dividends. One is a problem of the proper administration of income. Even though the profits are adequate for the declaration of extra dividends, it may be prudent to withhold them from distribution—it may be desirable to retain profits in the business in order to provide for a margin of safety in maintaining a regular dividend rate—a precaution particularly important in enterprises subject to fluctuating earnings. Again, accumulated profits may be earmarked for particular purposes (see page 173) or to provide for possible future losses.

The second problem of dividends is that of deciding the wisdom of incurring a liability which will subsequently decrease cash.

Although dividends are usually paid in cash, other methods are used. Script (written promises of the corporation to pay the dividend at a later date) is sometimes used to postpone the cash settlement of the liability.

From the standpoint of conserving cash, stock dividends are even more effective than script as a means of settling dividend liabilities. For example, in the illustration just used, if a stock dividend was given in settlement of the liability, the following entry would be made:

Dividend payable (common)	7,500	
Capital stock (common)		7,500

From the stockholder's point of view his proportionate share in the total assets of the corporation remains the same. He holds more shares of stock, but each share has a book value less than before the dividend was paid. From the standpoint of the corporation there has been no change in the total net worth of the business, although surplus has been decreased and capital stock increased by an equal amount.

Still another method, rarely employed, is the payment of dividends in property of the corporation.

Surplus.—As previously mentioned, the prudent administration of income may lead the directors to retain earnings within the corporation. Records of these earnings appear, for the most part, in some type of an earned surplus account. There are two principal types of surplus: earned and capital.

Earned surplus has been defined as "the balance of the net profits, net income, and gains of a corporation after deducting losses and after deducting distributions to stockholders and transfers to capital-stock accounts."[1] In general then this surplus consists of accumulated profits either from ordinary business operations or from unusual gains such as the sale of fixed assets. It is the surplus into which the profit or the loss for the period is closed.

Capital surplus "comprises paid-in surplus, donated surplus and revaluation surplus—that is, surplus other than earned surplus; surplus not arising from profits of operation but from such sources as sale of capital stock at premium, profit on dealings in a corporation's own stock, donated stock, appraisal valuations and surplus shown by the accounts at organization."[2]

Ordinarily a distinguishing feature between earned and capital surplus is the permanency of the net worth item. Earned surplus is subject to numerous changes; dividends, operating deficits, and adjustments for losses not applicable to the current fiscal period are examples of deductions from the accumulated earnings recorded in this account. In contrast, an item of

[1] Committee on Definition of Earned Surplus of the American Institute of Accountants.

[2] Preliminary Report of a Special Committee on Terminology of the American Institute of Accountants, p. 118, D. Appleton-Century Company, Inc., New York, 1931.

capital surplus once recorded is usually a relatively permanent form of proprietorship.

Reserves.—One of the problems of accounting for the administration of income consists of the establishment and operation of surplus reserves. The term "reserve" is commonly applied to three distinct types:

1. Surplus (or proprietorship)
2. Valuation
3. Liability

A *surplus reserve* is a portion of earned surplus earmarked for a specific purpose. Common examples of this type are reserves for plant extensions, obsolescence, and contingencies. The reserve is created by action of the board of directors and may be transferred back to the general surplus account when the board so desires. The journal entry to establish a reserve for contingencies for $10,000 would be

Surplus..................................	10,000	
Reserve for contingencies.................		10,000

A *valuation reserve* shows the decline in the asset to which it refers. The account reserve for depreciation, for example, shows the recorded decline which, when deducted from the cost of the asset, shows its book value.

The term *liability reserve* is commonly used to signify the account of an estimated accrued liability. The federal income tax is the example usually cited in explaining this type. If the accounting period closes with the calendar year, the tax cannot ordinarily be computed in sufficient time to know the amount. Hence an estimate is made and an entry debiting surplus (the tax is charged against profits, not operations) and crediting reserve for Federal income tax is recorded in the journal. The reserve account is closed upon payment of the tax.

Sometimes a reserve account is set up for wages or other accrued liabilities (with the corresponding charge to an expense account, not surplus). When these liabilities are clearly determinable, there is no reason why they should not be classified as accrued liabilities. If the liability must be estimated, less confusion results by classifying it as an estimated liability instead of a so-called reserve.

The expression *secret reserve* cannot properly be classified as any type of an account since it refers to the absence of recorded financial data. It results from the accounting practice of deliberately understating the value of net assets of an enterprise with, of course, an equivalent understatement of proprietorship. Despite the fact that the practice of creating secret reserves is widely used, it is to be condemned on the grounds that this device fails to disclose the financial facts of an enterprise as accurately as it is possible to show them.

Funds.—A common error in popular usage of the term reserve is to confuse it with a fund. A *fund* is a sum of money, or other assets, set aside for a specific purpose. The use of a surplus reserve may or may not be accompanied by the use of a fund.

The general procedure for using a fund with a surplus reserve may be illustrated by a corporation having a contract with its bondholders which provides for the payment of $15,000 annually, on December 31, to trustees who then invest the funds. The annual payment to the trustees would be recorded as follows:

Sinking fund	15,000	
Cash		15,000

Expenses incurred in operating the fund are deducted from any income earned from the securities. Net earnings are shown as income applicable to the current fiscal period. Disposition of the net proceeds from the operation of the fund depends upon the trust agreement—the proceeds may be turned over to the fund or retained by the company.

If the company wished to set up a surplus reserve at the same time, the annual entry would be

Surplus	15,000	
Reserve for sinking fund		15,000

When the bonds are paid, the reserve for sinking fund is closed into surplus.

Change from a Partnership to a Corporation.—Accounting problems relating to corporate reorganization and consolidation are often intricate; complicated transactions arise involving the change in stockholders' equities when one class of stock is exchanged for another. A problem commonly encountered in shifting from one form of an organization to another is that

presented by the change from a partnership to a corporation. The technique of closing the books of the partnership and transferring all asset, liability, and proprietorship accounts to the books of the corporation may best be shown by an illustration.

Assume that *A* and *B*, equal partners, decide to change their partnership to a corporation with a capitalization of $100,000. All assets and liabilities of the partnership are taken over by the corporation. *A* and *B* are to receive $90,000 par value in common stock for their business, it being agreed that their proprietorship is worth this amount. *C*, the third incorporator, buys 20 shares at par for cash. Assume further that the balance sheet of *A* and *B* appears as follows:

Assets		Liabilities and Proprietorship	
Cash	$ 5,000	Accounts payable	$ 15,000
Accounts receivable	25,000	Notes payable	5,000
Merchandise	50,000	*A* capital	40,000
Building	15,000	*B* capital	40,000
Land	5,000		
Total	$100,000	Total	$100,000

Since *A* and *B* receive $90,000 for a recorded equity of $80,000, the difference may be considered goodwill. This asset is recorded as follows:

Goodwill	10,000	
A capital		5,000
B capital		5,000

The appropriate entries to transfer the assets of the partnership to the corporation will be

A, *B*, and *C* Corporation	110,000	
Cash		5,000
Accounts receivable		25,000
Merchandise		50,000
Building		15,000
Land		5,000
Goodwill		10,000

Liability and proprietorship accounts are closed by the following entry:

Accounts payable	15,000	
Notes payable	5,000	
A capital	45,000	
B capital	45,000	
A, *B*, and *C* Corporation		110,000

On the books of the *A*, *B*, and *C* Corporation, the following entry will be made to record the transfer of the assets of the partnership:

Cash	5,000	
Accounts receivable	25,000	
Merchandise	50,000	
Building	15,000	
Land	5,000	
Goodwill	10,000	
A and *B* partnership		110,000

The entry to record the assumption of the partnership liabilities and the issue of common stock to *A* and *B* will be

A and *B* partnership	110,000	
Accounts payable		15,000
Notes payable		5,000
Capital stock common		90,000

The cash sale of stock to *C* will be recorded by the following entry:

Cash	2,000	
Capital stock		2,000

The balance sheet of the corporation will then appear as follows:

Assets		Liabilities and Proprietorship	
Cash	$ 7,000	Accounts payable	$ 15,000
Accounts receivable	25,000	Notes payable	5,000
Merchandise	50,000	Capital stock common	92,000
Building	15,000		
Land	5,000		
Goodwill	10,000		
Total	$112,000	Total	$112,000

Questions

Review.

1. Distinguish between the proprietorship of a partnership and the proprietorship of a corporation.
2. Enumerate three important characteristics of the corporation.
3. Under what conditions is the corporation preferable to the individual proprietorship and the partnership form of organization?
4. What are the steps in the formation of a corporation?
5. Enumerate five distinctive corporate records.

6. Is unissued capital stock an asset? Explain.
7. Where should stock discount or stock premium appear in the balance sheet?
8. Discuss the status of the capital stock subscription account. Where does it appear in the balance sheet?
9. Compare unissued stock with treasury stock.
10. How are dividends expressed for no-par stock?
11. Explain the following:

    a. Authorized capital stock
    b. Capital stock outstanding
    c. Capital stock subscribed
    d. Treasury stock
    e. Unissued stock
    f. No-par stock
    g. Donated capital stock

12. Distinguish between common and preferred stock.
13. Classify bonds according to security and method of paying interest.
14. Discuss the relation of discount and premium on bonds to bond interest.
15. How is bond premium and bond discount shown in the balance sheet?
16. Distinguish between earned and capital surplus. Why is this distinction important?
17. What is a "secret reserve"?
18. Distinguish between a surplus reserve and a fund.
19. Enumerate three types of reserves. Explain each.

Discussion.

20. "A stock dividend is not income from the standpoint of the recipient." Evaluate.
21. "Stock discounts are deferred charges to operations." Refute this.
22. "The declaration of a dividend is a problem of earnings; the payment of a dividend is a financial problem. The two are quite distinct." Discuss this distinction.

Suggested Supplementary Readings

On corporation accounting:

FINNEY, H. A. "Introduction to Principles of Accounting," Chaps. 18 and 19, Prentice-Hall, Inc., New York, 1938.

HATFIELD, H. R.: "Accounting," Chaps. 7, 8, 10, 12, and 15, D. Appleton-Century Company, Inc., New York, 1927.

———, T. H. SANDERS, and N. L. BURTON: "Accounting Principles and Practices," Chaps. 16 and 17, Ginn and Company, Boston, 1940.

HUSBAND, G. R., and O. E. THOMAS: "Principles of Accounting," Chaps. 22–26, Houghton Mifflin Company, New York, 1935.

KESTER, R. B.: "Principles of Accounting," Chaps. 18–20, The Ronald Press Company, New York, 1939.

KREBS, W. S.: "Outlines of Accounting," Chaps. 33–36, Henry Holt & Company, Inc., New York, 1923.

MACFARLAND, G. A., and R. D. AYARS: "Accounting Fundamentals," Chaps. 23–27, McGraw-Hill Book Company, Inc., New York, 1936.

McKINSEY, J. O., and H. S. NOBLE: "Accounting Principles," Chaps. 18–21, South-Western Publishing Company, Cincinnati, 1939.

PATON, W. A.: "Essentials of Accounting," Chaps. 33–36, The Macmillan Company, New York, 1938.

On corporation procedure and finance:

CONYNGTON, T., R. J. BENNETT: rev. by H. R. CONYNGTON, "Corporation Procedure," The Ronald Press Company, New York, 1927.

DEWING, A. S.: "Financial Policy of Corporations," The Ronald Press Company, New York, 1934.

FIELD, K.: "Corporation Finance," The Ronald Press Company, New York, 1938.

GERSTENBERG, C. W.: "Financial Organization and Management," Prentice-Hall, Inc., New York, 1932.

HOAGLAND, H. E.: "Corporation Finance," McGraw-Hill Book Company, Inc., New York, 1933.

CHAPTER XII

COST ACCOUNTING

General accounting records compiled by methods described in the preceding chapters have furnished management with its principal means of financial guidance. Shortly after the turn of the present century, however, the subject of cost accounting had developed sufficiently to become an important supplementary device for managerial control.

Definition of Cost Accounting.—*Cost accounting* may be defined as an analytical study of the expenses of a business. It includes the systematic accumulation and accurate recording of detailed cost information, its summarization and presentation in cost statements, and finally as a means of analysis, a comparison of the costs recorded with predetermined standards. Cost accounting is an expansion of general accounting—no new principles are introduced but the same ones are applied to expenses with greater detail than in general accounting.

Cost Accounting and Management.—The function of a cost accounting system is to furnish management with expense data which afford it an opportunity to exercise a satisfactory control over operations. This control is extended into three divisions of management: finance, production, and sales. Within each group cost accounting can render valuable contributions.

Finance and Cost Accounting.—The relation between finance and cost accounting may be explained in terms of the primary function of management, that of preserving the capital entrusted to it. This can be done only through operating the business at a profit. Financial or general accounting is a useful guide in accomplishing this objective, but it frequently fails to offer an analysis sufficiently detailed to enable management to act as quickly as highly competitive conditions require. A general accounting system offers only totals of expenses and summary statements at the close of fiscal periods, but a cost accounting system permits a better control of costs through detailed analyti-

cal studies summarized in monthly reports, or even more frequently, if necessary.

Production and Cost Accounting.—In no aspect of management is a knowledge of costs more essential than in production. Here the importance of physical operations is usually stressed. When this emphasis is made to the neglect of costs, it may lead to unfortunate consequences. If new machinery is installed, idle time reduced, defective work decreased, or waste material reclaimed at a cost in excess of the resulting economies, they cannot be considered profitable. The profitableness of changes in production methods must be judged in terms of the effect of these changes on the unit costs of the articles produced.

Adequate production control requires not only a knowledge of what the product costs but also a knowledge of the costs in every department and process in its manufacture. To provide this control, predetermined, or standard, costs are used as a basis for comparing the actual costs incurred. An analysis of the causes for variations between these figures is a most effective means of production cost control.

Cost Accounting and Sales.—Once the goods have been produced, the sales policies of the management determine largely whether the goods can be disposed at a profit. A cost accounting system offers considerable aid in controlling the selling and general administrative expenses. Particularly is this true when these costs are compared with standard costs and responsibility is fixed for the disparities resulting.

Attempts to increase revenue by reducing the selling price, planning campaigns, etc., are usually not considered within the province of cost accounting. It may be noted, however, that changes in the selling price can affect costs as well as revenue. A reduction in the selling price may increase the volume of sales and result in a lower unit cost of the product. Certain types of expenses (depreciation, insurance, and taxes, for example) change slightly regardless of the capacity at which the plant operates. Hence an increase in the revenue from sales would not be accompanied by a corresponding increase in these costs. It does not always follow that a reduction in selling price will produce this effect. The reduced price might bring forth a greater volume of sales but still not enough revenue to offset the added cost of the extra units sold. This would result in a

smaller profit than before. Whatever sales policy may be followed, a knowledge of the costs of distribution is essential before intelligent decisions can be made.

Classification of Expenses.—In terms of the functions of management, expenses are classified as follows:

1. Material
2. Labor
3. Manufacturing overhead
4. Distribution (selling and general administrative)

Elements of Cost to Manufacture.—Whatever benefits cost accounting may render in other fields, it is in manufacturing that it holds a predominant position. The three elements in the total cost to manufacture are material, labor, and manufacturing overhead.

The first element includes all the material used in the manufacture of a product that can be identified with, and charged to, it. In the manufacture of a radio, for example, the wood used in the cabinet would be considered direct material cost.

The second element includes all labor that can be identified with the article and charged to it. The wages of a worker who assembles the individual cabinet are an example. The term "prime cost" is frequently used to describe the sum of direct material and labor costs.

The third element consists of all items that cannot be directly applied to the product but are nevertheless incurred in its manufacture. Indirect material, indirect labor, and miscellaneous expenses entering into the manufacturing process—all the costs other than the direct ones—are thus classified as manufacturing overhead.

The glue used in the radio cabinet work would be an example of indirect material because its value cannot easily or accurately be allocated to each unit produced.

Salaries paid to superintendents and foremen and wages paid to janitors, watchmen, and storekeepers are examples of indirect labor. These costs are classified as items of manufacturing overhead since they cannot be easily distributed to each unit produced, or because it is not worthwhile to do so.

In addition to these two groups there are numerous other items. Heat, light, water, spoilage of goods in production,

depreciation of factory buildings and machinery, taxes on factory property and machinery, compensation insurance of factory employees, and insurance of the factory buildings and machinery are items of manufacturing overhead. In each case it would be inexpedient or impossible to prorate an amount of expense to the job or product produced.

Departments.—For ordinary purposes in factory cost accounting this threefold classification is inadequate because it does not divide the expenses so that responsibility for them can be easily delegated. Consequently expenses are frequently classified by departments which correspond, as far as possible, to production centers, or to sections of the factory using similar machines or engaged in similar operations which will permit the accumulation of expenses distinct from other such divisions or sections of the factory. Manufacturing departments are of two types, producing and service. A producing department is directly concerned with manufacturing the product. A service department, however, in some way assists the producing departments to better perform their functions (maintenance and cost accounting departments, for example) and only indirectly assists in manufacturing the product. The service department costs are apportioned to the producing departments on the basis of the benefits received.

Methods of Cost Accumulation.—The manner in which these costs are accumulated depends on the complexity of the business organization and the manner in which the product is manufactured.

In a small enterprise, operating under simple conditions, a complete cost accounting system is undesirable, for usually the organization does not require detailed information to control costs; neither can it afford the expense of compiling such information. Some control can be exercised by establishing departments and ascertaining costs for each. Assume, for example, that a business is started on a moderate scale to manufacture two articles. Information relative to the costs of each could be obtained by establishing two departments. The costs compiled by departments, when compared with the sales for each product, would give definite information about the profitableness of the two products.

When a more complete control is required, costs may be collected in one of two ways: either by a process system or by a specific order system.

Process Cost System.—The process cost system can be used successfully only when the product manufactured is the result of a sequence of operations and consists of like articles. The unit cost is determined by dividing the total cost for a period by the output. Therefore it is highly important that the articles be alike; otherwise the average unit cost would be misleading and inaccurate.

A vital feature of the process system is the cumulation of costs by departments. The unit cost is computed for the department, for the final product, and for any other classification of cost that seems desirable. This requires, of course, two sets of data: costs and units of output. To better explain the operation of a process system, assume that the following departmental costs were incurred for a given month:

	Department *A*	Department *B*	Department *C*
Material	$5,000	$2,016	$1,020
Labor	2,500	1,056	1,445
Manufacturing overhead	1,500	1,488	935
Total	$9,000	$4,560	$3,400

Assume further, that the following operating data, in units produced, for the same month, were as follows:

	Department *A*	Department *B*	Department *C*
Units started in process	5,000	5,000	4,500
Units completed and transferred to the succeeding department	5,000	4,500	4,000
Units completed but remaining in the department	.....	200	
Units still in process	.....	300*	500*

* Assume that the units in process in department *B* are one-third completed and that the units in process in department *C* are half completed.

SUMMARY COST STATEMENT FOR A PROCESS SYSTEM
For the Month of ______, 19__

	Department *A*		Department *B*		Department *C*		Total	
	Cost	Per Unit Cost	Cost	Per Unit Cost	Cost	Per Unit Cost	Cost	Per Unit Cost
Material	$5,000	$1.00	$2,016	$0.42	$1,020	$0 24	$8,036	$1.66
Labor	2,500	0.50	1,056	0.22	1,445	0 34	5,001	1.06
Manufacturing overhead	1,500	0.30	1,488	0 31	935	0.22	3,923	0.83
Cost incurred in each department	$9,000	$1.80	$4,560	$0.95	$3,400	$0.80	$16,960*	$3.55
Cost transferred from preceding department			9,000	1 80	12,375	2.75		
Total cumulated cost	$9,000	$1 80	$13,560	$2.75	$15,775	$3.55		
The cost incurred in each department is accounted for as follows:								
Cost transferred to succeeding department	$9,000		$12,375		$14,200			
Cost of work in process			635		1,575			
Cost of units completed and remaining in the department			550					
Total cost charged to each department	$9,000		$13,560		$15,775			

* The total cost of all the departments may be accounted for as follows:

Total cost of finished goods		$14,200
Inventory of work in process:		
Work still in process in Department *B*	$ 635	
Work completed in Department *B* and awaiting transfer to Department *C*	550	
Work still in process in Department *C*	1,575	2,760
		$16,960

The compilation of a process cost summary may be prepared in a form similar to the illustration on this page. The computations in the summary are as follows:

1. The per unit cost of $1.80 for Department *A* is obtained by dividing the total cost of the department ($9,000) by the number of units produced (5,000). The per unit cost of each element of cost to manufacture is determined in the same manner.
2. Department *B* is charged with the $9,000 of costs transferred from Department *A* plus the material, labor, and manu-

facturing overhead expenses of $4,560 charged directly to Department *B*, resulting in a total of $13,560 charged to Department *B*. In this department there was the equivalent of 4,800 units completed—4,500 units completed and transferred to Department *C*, 200 units completed but still remaining in the department, and 300 units one-third completed (or the equivalent of 100 completed units). The unit cost of $0.95 in Department *B* is obtained by dividing the cost incurred in the department ($4,560) by the number of units produced in the department (4,800). The cumulative total unit cost to this point is $1.80 (Department *A*) plus $0.95 (Department *B*) or a total of $2.75. The total cumulative cost of $13,560 charged to Department *B* may be accounted for as follows:

4,500 units at $2.75 per unit completed and transferred to Department *C*..........		$12,375
200 units at $2.75 per unit completed and retained in Department *B*............		550
300 units of work in process, one-third completed.		
300 units × $1.80 (unit cost in Department *A*) =	$540	
300 units, one-third completed in Department *B* is the equivalent of 100 completed units. 100 units × $0.95 (unit cost in Department *B*) =	95	635
		$13,560

3. Department *C* is charged with the $12,375 of costs transferred from Department *B* plus the material, labor, and manufacturing overhead costs of $3,400 charged directly to Department *C*, making a total of $15,775 charged to Department *C*. In this department there was the equivalent of 4,250 units completed—4,000 units completed and transferred to the finished goods inventory and 500 units only one-half completed (or the equivalent of 250 units fully completed). The unit cost of $0.80 in Department *C* is obtained by dividing the cost incurred in the department ($3,400) by the number of units produced in the department (4,250). The cumulative total unit cost to

this point is \$1.80 (Department *A*) plus \$0.95 (Department *B*) plus \$0.80 (Department *C*) or a total of \$3.55. The total cumulative cost of \$15,775 charged to Department *C* may be accounted for as follows:

4,000 units at \$3.55 per unit completed and transferred to the finished goods inventory		\$14,200
500 units of work in process, one-half completed.		
500 units × \$2.75 (unit costs in Departments *A* and *B*) =	\$1,375	
500 units, one-half completed in Department *C* is the equivalent of 250 completed units. 250 units × \$0.80 (unit cost in Department *C*) =	200	1,575
		\$15,775

The summary cost statement for the month (see page 184) shows this information in tabular form.

Each month (or a shorter interval, if necessary), a process cost summary is prepared similar to the illustration shown. The data appearing in the cost statement are, of course, entered in the journal. To show the amount of direct material applied to each department, the following entry is made:

Department *A*	5,000	
Department *B*	2,016	
Department *C*	1,020	
Material stores		8,036

Direct labor cost is apportioned by the following entry:

Department *A*	2,500	
Department *B*	1,056	
Department *C*	1,445	
Labor		5,001

Manufacturing overhead is distributed as follows:

Department *A*	1,500	
Department *B*	1,488	
Department *C*	935	
Manufacturing overhead		3,923

The transfer of costs from one department to another is accomplished by the following entries:

Department *B*	9,000	
Department *A*		9,000
Department *C*	12,375	
Department *B*		12,375

The finished goods (if valued as an actual, not a predetermined cost) are recorded as follows:

Finished goods	14,200	
Department *C*		14,200

The various work in process inventories may be closed into a single account by the following entry:

Work in process inventory	2,760	
Department *B*		1,185
Department *C*		1,575

When the above journal entries are posted, the departmental accounts will appear as follows:

DEPARTMENT *A*

Material	5,000	Transferred to Department *B*	9,000
Labor	2,500		
Manufacturing overhead	1,500		
	9,000		9,000

DEPARTMENT *B*

Material	2,016	Transferred to Department *C*	12,375
Labor	1,056	To work in process inventory	1,185
Manufacturing overhead	1,488		
Transferred from Department *A*	9,000		
	13,560		13,560

DEPARTMENT *C*

Material	1,020	To finished goods	14,200
Labor	1,445	To work in process inventory	1,575
Manufacturing overhead	935		
Transferred from Department *B*	12,375		
	15,775		15,775

FINISHED GOODS

From Department *C*	14,200	

WORK IN PROCESS INVENTORY

From Departments *B* and C	2,760	

The cost of the lost units may be transferred to a special account as follows:

Goods lost in production..........................	xxx	
Department *B*................................		xxx
Department *C*................................		xxx

The account goods lost in production is included in the manufacturing overhead expense before it is prorated to the various departments.

In brief, by using a process cost system, it is possible to determine the unit cost of the completed product, the department, or the process. For products which follow a sequence of operations in their manufacture and which are identical, this system is the only method of cumulating costs that can be used. Refined sugar, cement, and chemicals are illustrations.

The system does, however, have distinct limitations. It is restricted in its application, and the actual costs cannot be found until the end of the accounting period.

Specific Order System.—The last objection can be overcome to a considerable degree by the use of a specific order cost accounting system. Under this system costs are accumulated for each product or lot, and the cost of the particular article or group of articles can be determined when they are manufactured. It is not necessary to wait until the end of the month.

The difference between process and specific order cost accounting, while distinct, is in a sense one of degree, not of type. The specific order system, like the process system, accumulates costs by departments, thus enabling a departmental control of costs. In addition, however, costs are allocated to the particular product. Each order or product has its costs cumulated on a summary similar to the illustration on page 189. Thus a more complete control over costs is obtained by a specific order system than by a process system. It is also more expensive to operate. If it is possible to use the process system and obtain an average

SPECIFIC ORDER COST SHEET

Item________ Quantity________ Order No.________
Date Started________ Date Wanted________ Date Finished________

Direct Material					Direct Labor				Manufacturing Overhead	
Requisition No.	Kind	Quantity	Price	Total	Date	Department	Hours	Cost	Rate	Cost
					Totals					
					Unit Cost					

Total Materials Requisitioned. . . . .
Material Returned to Stores

Memo No.	Kind	Quantity	Price	
Total Returned				
Total Consumed				
Unit Cost				

Summary:
Materials________
Labor________
Mfg. Overhead________
Total Mfg. Cost________
Unit Cost________

cost with satisfactory results, such a procedure will be more economical.

In a majority of cases, however, this alternative is not possible. When the products are not manufactured as a result of sequence but are combined with other articles to complete them, any method of averaging the cost of such dissimilar items would result in a useless set of figures. Costs must be compiled in these cases by individual orders or individual products. Clothes tailored to suit the requirements of the individual, heavy machinery, and construction work are examples of products which must be manufactured to individual specifications and which must have their costs cumulated in a manner similar to the illustration on page 189.

It should be noted that the use of one method of cumulating costs does not imply that the other is excluded. It is quite possible for both systems to be employed—a process cost system in which operations are in sequence and the products are of a simple nature and of one kind, and a specific order system in which these products are assembled with other parts to make a finished product which varies considerably in the final form. For example, a construction company making its own cement would cumulate the cost of this product on a process basis, although the cost of the entire project would be cumulated on a specific order basis.

Questions

Review.

1. Why is the control of costs especially important to management?
2. What is the relation between finance and cost accounting? Production and cost accounting? Sales and cost accounting?
3. Give a functional classification of expenses.
4. Enumerate and explain briefly the elements of cost to manufacture.
5. Why are expenses classified by departments?
6. Distinguish between a producing and a service department.
7. Distinguish between a process cost system and a specific order cost system. Under what conditions should each be used?
8. Does the use of one method of compiling costs mean that any other method is excluded? Explain.

CHAPTER XIII

COST ACCOUNTING.—(*Concluded*)

In order to render the service of which it is capable, cost accounting should enable management to control not only products, processes, and departments, but also different types of costs: principally, manufacturing (material, labor, and manufacturing overhead) and distribution (selling and general administrative).

General Ledger Controlling Accounts for Costs.—For the most part, the detail in factory cost accounting is controlled by several accounts in the general ledger. Under the least complicated cost accounting systems these controlling accounts are as follows:

1. Materials
2. Labor
3. Manufacturing overhead
4. Work in process
5. Finished goods

The materials account shows, in summary form, the total raw material received and issued during the month and the amount remaining on hand at the end of the month. The labor account shows the total wages incurred. The manufacturing overhead account receives only the indirect expenses of manufacturing or those which cannot be applied directly to the product. The work in process account receives all costs entering into production. As the partially finished goods are completed, their costs are transferred to the finished goods account.

Material.—The control of costs should begin before they have been incurred. If it is to be effective, a plan must be devised to reduce the possibility of error and to make theft, fraud, and other losses difficult. The expression "internal check" is used to describe a plan designed to accomplish these objectives.

The following statement affords a terse definition of internal check:

> Such a system consists in the accounting records, methods, and details generally of an establishment being laid out in such a way that no part of the accounts will be under the absolute and independent control of any one person; that on the contrary, the work of one employee will be complementary to that of another; and that a continuous audit will be made of the details of the business.[1]

The first step in the establishment of a system of internal check is to determine the various operations and the agents

PURCHASE REQUISITION

Requisition No.______
Purchase Order No.____

Vendor________________________
Date Ordered______ Date Desired______ Date Received______

Quantity	Description	Account No. Charged

Requisitioned By____________ Approved By____________

responsible for them. The principal operations in the control of materials are as follows:

1. Purchasing
2. Receiving
3. Storing
4. Accounting

Purchasing.—The responsibility for prudently buying goods is delegated to the purchasing agent. Briefly stated, the functions ordinarily performed by his department are as follows:

[1] Montgomery, R. H., and W. A. Staub, "Auditing Principles," p. 39, The Ronald Press Company, New York, 1923.

1. To receive and judge requests for purchases
2. To order the goods
3. To verify the fact that goods received are as ordered

His office will have on hand quotations (or they will be secured when requests for purchases are made) which enable him to know the most favorable prices, the most desirable method of transportation, and any other factors that affect the cost of securing materials. The request to purchase can come from the storekeeper or from other authoritative sources. This request is formally made on a purchase requisition prepared in duplicate (illustration, page 192). One copy is sent to the purchasing office and constitutes the request for goods to be ordered. The second copy is retained by the storekeeper as a memoranda. Both copies bear a number in order to facilitate identification.

PURCHASE ORDER

Purchase Order No.______ Purchase Requisition No.______ Date______

Vendor______________________________

Address______________________________

Shipping Instructions________________________

Catalogue Number	Quantity	Description of Material	Unit Price	Total Price

By________________
Purchasing Agent

When the purchasing agent sends for the goods, he prepares several copies of a purchase order (see above). One copy is sent to the company from whom the goods are ordered. This serves as authority for shipping the goods. A second is retained by the purchasing department as a memoranda. A third copy may be sent to the department requesting the goods in order to

indicate that the purchase order has been sent to the vendor. A fourth may be sent to the receiving department.[1]

When the vendor's invoice (see below) is received by the company, it is sent to the purchasing agent's office where it is compared with the purchase order and finally with the receiving records. Quoted prices, computations, and extensions are checked, and, if these are found to be correct, the invoice is sent to the accounting department.

INVOICE

To: Invoice No.____

Name______________________ Date________

Address____________________

__________________________ Terms________

Description	Unit Price	Amount

Receiving.—When a copy of the purchase order is sent to the receiving department, it is filed to await delivery of the goods. The functions of this department may be listed briefly as follows:

1. To receive incoming materials
2. To check the quantity and quality of goods received
3. To send goods to the stores department

When materials are received from the vendor, the receiving clerk signs what papers may be necessary to release the shipment

[1] Sometimes, particularly in small receiving departments, an objection is raised against sending a statement of the expected quantity and quality of goods to the receiving clerk. It is felt that this encourages careless checking. It should be noted, however, that, when a copy of the purchase order is not sent, some report must be prepared and a check against the quantity and quality ordered must be made elsewhere. In the meantime the goods await final storage pending approval. This complicates storage problems.

from truckmen or other carriers. He then inspects the goods and reports quantity, quality, breakage, or other important data on the receiving report (see below). The receiving report is prepared in triplicate. One copy is sent to the purchasing department, where it is compared with the invoice. Another is retained by the receiving clerk for reference. A third is sent to the storekeeper, who checks it when he stores the goods.

RECEIVING RECORD

Receiving Record No.______

Received from____________________ Date__________

Date Shipped________ Route________ Incoming Charges______

Purchase Requisition No.___ Purchase Order No.___ Account No.___

Quantity	Weight	Material Received	Unit Cost	Total Cost

By________________ By________________
Inspector Receiving Clerk

Storing.—The successful organization and operation of the storeroom is a most important part of the effective control of merchandise. Not only is the storeroom a vulnerable place for theft, but losses of equal seriousness can occur through spoilage and by not having the proper amount on hand when needed. An experienced man delegated with the responsibility of maintaining the proper stock of goods and of receiving and issuing the material should be in charge of the storeroom. His work will be

STORES LEDGER SHEET

Name of Article__________ Account No.__________
Maximum__________ Minimum__________ Location__________

Ordered				Received				Issued						Balance			
Date	Purchase Order	Quantity	Date Due	Date	Quantity	Unit Price	Cost	Date	Requisition No.	Production Order No.	Quantity	Unit Cost	Cost	Date	Quantity	Unit Cost	Cost

greatly facilitated if attention is given to the proper location of the storeroom, if it is situated conveniently to receive materials, and if they can be issued close to the point of use. A study of the most suitable methods of storing will usually result in greater ease and economy in handling materials.

In general the storekeeper is charged with the following responsibilities in handling materials:

1. Receiving
2. Storing
3. Issuing
4. Keeping records

When the storekeeper receives the report from the receiving department, it is checked carefully and, if found correct, serves as the basis for an entry on the stores ledger sheet (page 196). The receiving report is then filed and the goods are stored.

MATERIAL REQUISITION

Charge:
Production Order No.________
Standing Order No.________

Credit:
Stores Account No.________
Requisition No.________

Deliver To________________________

Quantity	Description	Unit Cost	Total

Date____________ Received By____________

Material is issued by the storekeeper only upon presentation of appropriate requisitions by foremen or others with the proper authority (see above). These requisitions serve as a basis for entries in the issued section of the stores ledger. The difference

between the received and issued section represents the amount of material which, if there has been no error, will be found in the storeroom and will be equal to the balance of the controlling account materials in the general ledger. Periodically the amount of goods in the storeroom as shown by the store ledger card is checked by physical count. Any shortage or excess quantity as disclosed by the stores record is adjusted to conform to the actual count.

Entries to Record Material Cost.—The controlling account materials in the general ledger and the subsidiary cost accounting records are affected by all transactions[1] relating to direct and indirect materials received or issued from the storeroom. The principal transactions are as follows:

1. Material received
2. Direct material issued
3. Direct material returned from production
4. Indirect material issued
5. Indirect material returned from production

When goods are purchased, the following entry is made on the general accounting records:

(Dr.) Materials
  (Cr.) Accounts payable (or vouchers payable)

This entry is made in the voucher register. The same amount, compiled from the receiving reports, is carried to the material received section of the stores ledger.

When direct material is issued to production, the following entry is made:

(Dr.) Work in process
  (Cr.) Materials

This is a summary entry made at the end of the month and compiled from the total of material requisitions received by the storekeeper. These requisitions are used as the basis for an

[1] Not all of the possible cost accounting forms and entries are included in this chapter. To describe these would confuse rather than assist the student to obtain a general impression of cost accounting. For a detailed treatment of material, labor, and manufacturing overhead, see C. L. Van Sickle, "Cost Accounting," Harper & Brothers, New York, 1938, or other texts listed at the end of this chapter.

entry made in the material issued section of the stores ledger sheet. At the same time an entry is made in the materials section of the cost sheet.

When direct materials are returned from production in a usable state, the entry on the general accounting records to record the total is

(Dr.) Materials
 (Cr.) Work in process

This entry is compiled from the monthly summary obtained from the storekeeper. As these returned items appear in the storeroom, a memoranda is prepared by the storekeeper. This is used as the supporting document for an entry on the stores ledger. It may be handled in the material received section of the ledger similar to the receipt of additional material, or it may appear in the material issued section in red ink as a deduction. Similarly an entry to denote a deduction is made in red ink in the materials section of the cost sheet.

Labor.—In general the same technique is used for the control of direct labor cost as for raw material. Care is taken that each important operation involves two or more people and that the work of one checks, without duplicating, the work of another. Forms (which vary widely depending on individual business requirements) are an essential part of a system of internal check for labor.

The usual operations to be controlled are the following:

1. Hiring
2. Recording time
3. Supervision
4. Computing labor cost
5. Paying

If the business is large enough, a personnel director or an employment manager examines the prospective employee and obtains essential information about him. If the worker is hired, his name is added to the list of active workers.

Once employed, the worker's daily entrance and exit to the plant or building should be carefully checked. Numerous arrangements have been devised to obtain these data. One of the most widely accepted is the time clock card (page 200).

CLOCK CARD

Name__________________ No.______
Week Ending__________________

	Morning		Afternoon		Overtime		Total Hours
	In	Out	In	Out	In	Out	
Sunday							
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday							

Regular Time________Rate________ $________
Overtime________Rate________ ________
Total wages________________ $________

How the time of the worker is spent in the factory is shown by the daily time report (page 201). The total amount of time on the time clock record should, of course, check with the total time spent by the worker, as shown by the daily time report. This report is likewise a check upon the supervisory duties of the foreman in that his signature indicates his belief that the report is accurate.

The labor cost is computed from the daily time report by the cost clerk. He checks the computations and extensions and distributes the costs to departments or to particular jobs.

Finally the paymaster's department prepares the payroll. This information is drawn from the payroll sheet (page 202). The chief duty of the paymaster is to pay the worker and to have evidence of having done so. The check is the most convenient as well as the most usual form of payment. If employees are paid by currency, the pay envelopes are prepared for each worker as

DAILY TIME REPORT							
Name______				Date______			
Job No.	Department	Description	Time Started	Time Stopped	Total Hours	Rate	Amount
Totals							
					FOREMAN		

shown by the amount on the payroll summary. A statement of earnings and deductions is sometimes included. If a payroll is used, it should be signed by all those who have had anything to do with its preparation as well as by those who have received payment. It should also be signed by the auditor who compared the payroll with the list of active workers in the employment manager's office.

Thus the most common sources of defalcation would be made difficult under a system of internal check. An inflation of the payroll, for example, would require the collusion of someone in the employment manager's office, a timekeeper or cost clerk, and possibly a foreman and a worker. Similarly other types of collusion would require the combined efforts of two or more persons in order to be perpetrated without being quickly discovered.

Entries to Record Direct Labor Transactions.—The principal transactions involving direct labor cost are as follows:

1. Its incurrence
2. Its payment
3. Its application to production

The following entry is required to record labor cost incurred:

(Dr.) Labor
    (Cr.) Accounts payable (or vouchers payable)

DIRECT LABOR PAYROLL

Sheet No.________ for Week Ending________

No.	Name	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total Hours	Hourly Rate	Total Wages

In the general accounting records this appears in the voucher register.

When the payroll is paid, the following entry is made:

(Dr.) Accounts payable (or vouchers payable)
  (Cr.) Cash

This entry is recorded in the cash disbursements journal and in the voucher register. No cost accounting record is necessary.

When direct labor costs are applied to production, the necessary entry is

(Dr.) Work in process
  (Cr.) Labor

If a process cost system is in use, the total direct labor cost is allocated at the end of the month to the departments or processes in which the cost was incurred. If, however, a specific order system is in use, the cost sheet of each order (illustration, page 189) is charged for the proper amount.

Manufacturing Overhead.—Unlike material and labor costs, a system of internal check is not organized to control manufacturing overhead because it consists of so many diverse elements. It should be noted, however, that some of these elements are subject to control by internal check. Indirect material and indirect labor, important portions of manufacturing overhead, ordinarily come under the same system of control as direct material and direct labor. For the remainder (miscellaneous items incurred in the factory such as insurance, power, and repairs), control is exercised by comparing actual costs with a predetermined standard and by explaining any difference.

For a process cost system the diverse elements of manufacturing overhead cause no special difficulty because all costs are averaged and there is no reason why a fine distinction between direct and indirect costs should be made. For a specific order system, however, it is quite a different matter. Because of the indirect nature of manufacturing overhead, it is impossible to measure exactly the proper amount which should be distributed to a particular unit.

For this reason no attempt is made to distribute manufacturing overhead to production as it is incurred. Instead the amount applied is predetermined. A normal distribution rate is used

which apportions all manufacturing overhead to production over the course of a fiscal period. For any one month, however, there may be considerable disparity between the manufacturing overhead incurred and the amount applied to production. The cost of heating the factory, for example, may be great during the winter and negligible during the summer. For the unit cost of an article to be representative, seasonal factors should be eliminated and a period of time selected long enough to cover such cost variations.

Again, in seasonal industries, production does not bear a close relation to manufacturing overhead; for the most part these costs increase as time elapses, regardless of the output. Machines continue to depreciate, and taxes must be paid despite volume of the goods manufactured.[1] By using a normal distribution rate, seasonal factors can be eliminated and manufacturing overhead costs can be rendered comparable from month to month.

There is still another reason why predetermined costs are necessary to distribute manufacturing overhead: as soon as a job is completed, it should be possible to know its cost. No difficulty is encountered in the case of material and direct labor costs, since they are known. Manufacturing overhead, however, must be estimated and apportioned by a normal distribution rate.

There are two important considerations in determining the selection of rates: past experience and an estimate of probable changes.

Of the numerous rates for the distribution of manufacturing overhead, the direct labor-hour, the direct labor cost, and the machine-hour rates are probably used to a greater extent than others.

Direct Labor-hour Rate.—The direct labor-hour rate is obtained by dividing the estimated total departmental manufacturing overhead for the coming year by the estimated labor-hours to be worked in that department in the next year. Assume, for example, that in a given department the workers engaged in direct labor are employed 10,000 labor-hours (obtained by multi-

[1] The distinction between different types of manufacturing overhead should be noted. Certain elements such as depreciation, taxes, and insurance are known as fixed costs and accumulate regardless of output. Other elements such as repairs, power, and light are known as variable costs and fluctuate with output (although not proportionately).

plying the number of hours spent by each worker by the total number of workers). Assume, further, that the yearly amount of manufacturing expense incurred in the department averages about $5,000. Reduced to a labor-hour rate, this means that, for every hour of direct labor applied to a product, a manufacturing overhead cost of 50 cents is incurred ($5,000 manufacturing cost ÷ 10,000 labor-hours). Hence for any job within the department the number of direct labor-hours multiplied by the rate of 50 cents will result in the amount of manufacturing overhead applicable to the job in question.

Labor Cost Rate.—The labor cost rate for a department is similarly computed. Assume that the direct labor cost in the department under discussion amounts to $20,000 a year. In this instance manufacturing expense is 25 per cent of direct labor cost ($5,000 manufacturing expense ÷ $20,000 direct labor cost). Thus 25 per cent of the direct labor cost will be the amount of manufacturing overhead applicable to any job in this department.

Machine-hour Rate.—If the total number of hours for the operation of machines in a department amounts to 2,000 per year, the cost per hour of manufacturing overhead, expressed in terms of a machine-hour rate, would be $2.50 ($5,000, the manufacturing overhead ÷ 2,000 machine-hours). A particular job requiring 3 hours therefore would bear a manufacturing overhead cost of $7.50.

The rate to be used, of course, is that one which most accurately distributes the total manufacturing overhead to production. If machines set the pace and direct labor enters only slightly into production, it is unusual for either direct labor cost or hours to be used as a rate base.

Usually a distribution rate based on time will be found preferable to one based on cost, because manufacturing overhead increases as time elapses. A machine-hour, labor-hour, or a similar time basis will ordinarily be preferable to a rate based on cost.

Recording Manufacturing Overhead.—The principal transactions involved in accounting for manufacturing overhead are as follows:

1. Determining the amount of manufacturing overhead by types of expenses

2. Classifying expenses incurred by the departments affected
3. Distributing service department expenses to producing departments
4. Applying manufacturing overhead to the product
5. Accounting for the difference between the manufacturing overhead incurred and the amount applied to production

Assume that the estimated manufacturing overhead expenses for the coming year are as follows:

Indirect material	$1,200
Indirect labor	800
Insurance	600
Repairs	300
Heat, light, and power	1,100
Depreciation of machinery	1,000
	$5,000

Assume further that this estimated overhead expense is based on a production of 10,000 units. Under these conditions the predetermined overhead rate to be applied to production would be 50 cents for every unit produced.

The actual overhead expenses incurred during the year, however, amounted to $5,100 and were recorded by the following entries:

Indirect material	1,150	
Materials		1,150
Indirect labor	825	
Vouchers payable		825
Insurance	650	
Vouchers payable		650
Repairs	325	
Vouchers payable		325
Heat, light, and power	1,150	
Vouchers payable		1,150
Depreciation of machinery	1,000	
Reserve for depreciation of machinery		1,000

Manufacturing overhead (actual)	5,100	
Indirect material		1,150
Indirect labor		825
Insurance		650
Repairs		325
Heat, light, and power		1,150
Depreciation of machinery		1,000

These expenses are entered on a manufacturing overhead distribution sheet (see below), where they are classified and distributed to the proper departments.

MANUFACTURING OVERHEAD DISTRIBUTION SHEET

Expenses	Total	Department *A*	Department *B*	Department *C*	Department *D*
Indirect material	$1,150	$ 400	$ 500	$150	$100
Indirect labor	825	300	200	125	200
Insurance	650	300	250	25	75
Repairs	325	125	100	50	50
Heat, light, and power	1,150	375	550	50	175
Depreciation of machinery	1,000	500	500		
Total cost	$5,100	$2,000	$2,100	$400	$600

These items are distributed to the various departments on the basis which seems most equitable. The underlying conditions in the factory must be considered before deciding upon the most accurate method. It is common practice, however, to distribute indirect material on the basis of the departments indicated on the material requisitions; indirect labor according to labor-hours; depreciation, taxes, and insurance on machinery in proportion to the investment in machinery; rent, light, heat, and depreciation of the building on the basis of floor space; and superintendence according to the number of laborers in each department.

When manufacturing overhead is classified by departments, an entry similar to the following (this is a summary entry for the month) is made in the general journal at the end of the month:

Department *A*	2,000	
Department *B*	2,100	
Department *C*	400	
Department *D*	600	
Manufacturing overhead		5,100

These departments are of two types: those immediately concerned with production of the product and those which render a service to the producing departments. In order to learn the cost of a producing department, service department costs must first be distributed. Assuming that *C* and *D* are service departments and that an equal distribution of services is made to the producing departments *A* and *B*, this distribution will be made as follows:

Department *A*	500	
Department *B*	500	
Department *C*		400
Department *D*		600

These service departmental accounts show the actual manufacturing overhead in each department.

When a process cost accounting system is used, manufacturing overhead is usually distributed no further. When a specific order cost accounting system is used, however, an additional step is taken: manufacturing overhead is distributed on the basis of a normal rate to the particular job.

If 9,600 units were produced during the year and if the predetermined rate for the application of manufacturing overhead was 50 cents per unit, the amount applicable to production for the year would be $4,800. The 12 monthly entries to show the amount of manufacturing overhead applied to production may be summarized for convenience as follows:

Work in process	4,800	
Applied manufacturing overhead, Department *A*		2,550
Applied manufacturing overhead, Department *B*		2,250

If the distribution rate has been wisely selected, at the end of the year, differences between the balances of the departmental manufacturing overhead accounts will be slight. Month by month, however, there will be disparities. Since statements are prepared from costs incurred, an adjustment must be made to take care of these differences. Any discrepancy between the two balances is closed into the account over- and underapplied manufacturing overhead. In Department *A*, for example, the actual manufacturing overhead is $2,500, the applied manufacturing overhead is $2,550 and, therefore, the amount overapplied is $50.

The journal entry to record this is as follows:

Applied manufacturing overhead Department *A*	2,550	
Department *A* manufacturing overhead......		2,500
Over- and underapplied manufacturing overhead..................................		50

The journal entry to record the underapplied manufacturing overhead of Department *B* (determined in the same manner as for Department *A*) is as follows:

Department *B*, applied manufacturing overhead	2,250	
Over- and underapplied manufacturing overhead	350	
Department *B*, manufacturing overhead......		2,600

The balance of the over- and underapplied manufacturing overhead account is carried forward month by month. At the end of the year it is analyzed and is apportioned to the proper elements of manufacturing costs for the period. Usually the amount is divided between the cost of goods sold and the inventories (finished goods and work in process). Frequently, however, if the balance is not large it is closed into the cost of goods sold account. The resultant error is not important if the inventory values are small.

If, however, the balance in the over- and underapplied manufacturing overhead account arose because of abnormal conditions (an unusually large amount of idle time, for example) then the resulting excessive overhead cost should be considered a loss rather than an addition to the cost of manufacturing the product and should be shown as a nonoperating expense item in the profit and loss statement (this is the assumption made in the illustrative problem, page 215).

The various accounts affected by this illustration are as follows:

Manufacturing Overhead (Actual)

5,100	5,100

Department *A*, Manufacturing Overhead (Actual)

2,000	2,500
500	
2,500	2,500

Department *B*, Manufacturing Overhead (Actual)

2,100	2,600
500	
2,600	2,600

Department *C*, Manufacturing Overhead (Actual)

400	400

Department *D*, Manufacturing Overhead (Actual)

600	600

Department *A*, Applied Manufacturing Overhead

2,550	2,550

Department *B*, Applied Manufacturing Overhead

2,250	2,250

Over- and Underapplied Manufacturing Overhead

350	50

Distribution Costs.—Until recent years costs to manufacture have received attention to the neglect of selling and administrative costs. This situation has existed despite the fact that profits depend, among other things, not only upon the economical production of goods but also upon their distribution to the consumer at a suitably low cost.

The general technique of control over distribution costs[1] (which include all the activities of selling, delivery, and collecting for the goods sold) is similar to that of manufacturing overhead. The budget, or a system of standard costs, is prepared to indicate what the marketing activities should cost. The difference between these predetermined costs and the costs incurred discloses how well the performance conforms with the expectations. Much of the analysis of selling and administrative costs is of a statistical nature and is made quite apart from the books of

[1] Traditionally, costs have been divided into production, selling (distribution), and general administration groups. With increasing study in the analysis of costs, there is the tendency to allocate those of the general and administrative groups to production and distribution.

account. Although the exact procedure to be followed in this analysis depends on the type of business and the features to be stressed, the following steps are essential:

First, the costs are recorded by types of expenditures, such as salesmen's salaries, advertising, freight-out, etc.

Second, the distribution process is divided according to marketing activities. Despite the variations found in different enterprises, a convenient fourfold classification has been made as follows:[1]

1. Creating demand—that is, arousing effective desire on the part of the customer for the product which the enterprise has to sell, through advertising, promotion, solicitation, etc.
2. Obtaining orders—that is, converting this demand into a specific agreement for the purchase of the product, through contact by salesmen or otherwise.
3. Handling and delivery—that is, conducting the physical operations incident to storing, sorting, grading, packing, loading, shipping, transporting, and delivering the product.
4. Realizing on the sale—that is, arranging credit terms, billing, posting, preparing statements, collecting, handling and depositing cash, with work in connection with sales record-keeping generally.

Third, costs classified on the basis of expenditures are reclassified according to functions. Some of these costs can be allocated directly to particular functions, but many others will have to be distributed on the most equitable basis possible.

Fourth, costs are classified according to salesmen, customers, territories, products, or other groups. Again this proration is made on what seems to be the most equitable base.

Fifth, when the cost per unit classified according to salesmen, customers, territories, products, or other bases is made and is compared with corresponding analyses of the revenue received from sales (classified by the same groups as the costs), management should be able to derive an opinion of the profitableness of each unit. In order to do this it should, of course, have some idea of what the costs and profits of the various classifications should be; hence an adequate control over distribution costs presupposes that budgets or standard costs have been established.

Statements in Cost Accounting.—The control afforded by a cost accounting system over the various costs in making and

[1] "Accountants' Handbook," p. 1333.

selling the product is incomplete without statements which present significant data to management. In this respect cost accounting offers an outstanding service to management—it permits the preparation of monthly statements instead of waiting until the close of the fiscal period. When statements are presented with greater frequency, it is possible, of course, to discover defects just that much quicker and to take immediate steps to overcome them.

The balance sheet of a manufacturing concern differs slightly from that of a trading concern. The principal distinction lies in the fact that there are three inventories: raw materials, goods in process, and finished goods, whereas in the ordinary trading concern there is only the finished goods inventory. Furthermore in most manufacturing concerns perpetual inventories are kept which greatly facilitate the preparation of statements.

Again, the profit and loss statement differs but slightly in form except in the cost of goods sold section. Here the manufacturing section may be expanded, or better still, may appear as a separate schedule.

If the manufacturing section appears as a separate statement, there are three principal sections: material, labor, and manufacturing overhead. In each case the amount which entered into production is shown.

The following illustrations are examples of the principal cost statements referred to in this chapter.

BLACKWELL MANUFACTURING COMPANY

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$ 3,550.00	
Accounts receivable	19,872.50	
Inventories, December 1, 19__:		
Finished goods	5,500.00	
Goods in process	9,633.50	
Materials (direct and indirect)	14,835.25	
Machinery and factory equipment	42,600.00	
Reserve for depreciation of machinery and equipment		$ 6,300.00
Office equipment	5,500.00	
Reserve for depreciation of office equipment		600.00
Buildings	35,975.00	
Reserve for depreciation of buildings		3,575.00

Land	11,000.00	
Unexpired insurance	700.00	
Accounts payable		8,500.00
Factory payroll		320.00
Notes payable		2,600.00
Common stock		100,000.00
Surplus		21,933.25
Sales		31,500.00
Sales returns and allowances	375.00	
Purchase discount		160.00
Purchase of materials	8,275.00	
Factory labor	13,350.00	
Factory light, heat, and power	785.00	
Repairs to equipment	125.00	
Sundry factory expense	635.00	
Salesmen's salaries	1,500 00	
Salesmen's traveling expenses	410.00	
Advertising	250.00	
Office salaries	440.00	
Office supplies expense	25.00	
Telephone and telegraph	32.00	
Taxes	80.00	
Interest expense	22.50	
Bad debts	17 50	
	$175,488.25	$175,488.25

Additional Data:

(1) Inventories, December 31, 19__:

Finished goods	$ 6,200
Goods in process	7,630
Materials	13,570

Of the materials issued from the storeroom during the month, $1,000 worth consisted of indirect materials.

(2) One-sixth of the factory labor is indirect labor.

(3) One-half of the telephone and telegraph expense is apportioned to selling expenses, the balance to general administrative expenses.

(4) The interest expense accrued amounts to $7.50.

(5) Depreciation on machinery and factory equipment is 10 per cent annually.

(6) Depreciation on office equipment is 5 per cent annually.

(7) The estimated losses from bad debts amount to 1 per cent of the gross sales.

(8) The insurance expired amounts to $100. Three-fourths of this is to be distributed to factory expense, and the balance to general administrative expense.

(9) The underapplied manufacturing expense amounts to $65.

(10) The depreciation on the building is 3 per cent annually. Two-thirds of the cost is to be distributed to factory expense and one-third to general administrative expense.

(11) Three-fourths of the taxes expense is to be distributed to factory cost and one-fourth to general administrative expenses.

BLACKWELL MANUFACTURING COMPANY

BALANCE SHEET, DECEMBER 31, 19—

Assets

Current Assets:			
Cash		$ 3,550.00	
Accounts receivable	$19,872.50		
Less reserve for doubtful accounts	315.00	19,557.50	
Finished goods		6,200.00	
Goods in process		7,630.00	
Materials		13,570.00	
Total current assets			$ 50,507.50
Fixed Assets:			
Office equipment	$ 5,500.00		
Less reserve for depreciation for office equipment	622.92	$ 4,877.08	
Machinery and equipment	$42,600.00		
Less reserve for depreciation for machinery and equipment	6,655.00	35,945.00	
Buildings	$35,975.00		
Less reserve for depreciation for buildings	3,664.92	32,310 08	
Land		11,000.00	
Total fixed assets			84,132.16
Deferred Charges:			
Unexpired insurance			600.00
Total assets			$135,239.66

Equities

Current Liabilities:		
Accounts payable	$ 8,500.00	
Notes payable	2,600.00	
Factory payroll	320.00	
Interest expense accrued	7.50	
Total current liabilities		$ 11,427.50
Net Worth:		
Common stock	$100,000.00	
Surplus	23,812.16	123,812.16
Total liabilities and net worth		$135,239.66

BLACKWELL MANUFACTURING COMPANY

Condensed Profit and Loss Statement

For the Month Ending December 31, 19__

Sales		$31,500.00	
Less sales returns and allowances		375.00	
Net sales			$31,125.00
Less cost of goods sold (see statement of cost to manufacture and cost of goods sold)			26,223.70
Gross profit on sales			$ 4,901.30
Selling expenses:			
Salesmen's salaries	$1,500.00		
Salesmen's traveling expenses	410.00		
Advertising	250.00		
Telephone and telegraph	16.00		
Total selling expenses		$ 2,176.00	
General and administrative expenses:			
Office salaries	$ 440.00		
Office supplies expense	25.00		
Telephone and telegraph	16.00		
Insurance	25.00		
Depreciation of building	29.97		
Depreciation of office equipment	22.92		
Taxes	20.00		
Bad debts	332.50		
Total general and administrative expenses		911.39	
Total operating expenses			3,087.39
Net operating profit			$ 1,813.91
Other expenses:			
Interest expense		30.00	
Underapplied manufacturing overhead		65.00	
		$ 95.00	
Other Income:			
Purchase discount		160.00	65.00
Net profit for the period			$ 1,878.91

BLACKWELL MANUFACTURING COMPANY

STATEMENT OF COST TO MANUFACTURE AND COST OF GOODS SOLD

For the Month Ending December 31, 19__

Direct material:		
Materials inventory, December 1, 19__	$14,835.25	
Purchases of materials	8,275.00	
Total	$23,110.25	
Less materials inventory, December 31, 19__	13,570.00	
Materials placed in production	$ 9,540.25	
Indirect materials used	1,000.00	
Cost of direct materials used		$ 8,540.25
Direct labor applied to production		11,125.00
Manufacturing overhead applied to production (See analysis of manufacturing overhead)		5,254.95
Total cost to manufacture		24,920.20
Add work in process, December 1, 19__	$ 9,633.50	
Deduct work in process, December 31, 19__	7,630.00	
Net addition		2,003.50
Cost of goods manufactured		$26,923.70
Add finished goods, December 1, 19__	$ 5,500.00	
Deduct finished goods, December 31, 19__	6,200.00	
Net deduction		700.00
Cost of goods sold		$26,223.70

BLACKWELL MANUFACTURING COMPANY

ANALYSIS OF MANUFACTURING OVERHEAD

For the Month Ending December 31, 19__

Manufacturing overhead incurred:		
Indirect labor	$2,225.00	
Indirect material	1,000.00	
Factory light, heat, and power	785.00	
Repairs to equipment	125.00	
Factory insurance	75.00	
Depreciation of machinery and factory equipment	355.00	
Depreciation of building	59.95	
Taxes	60.00	
Sundry factory expense	635.00	
Total manufacturing expense		$5,319.95
Less applied manufacturing expense		5,254.95
Balance underapplied manufacturing expense		$ 65.00

Summary.—Cost accounting can render important services to management in the fields of finance, production, and sales. In finance it can supplement the general accounting records by offering detailed analyses of expenses, and it permits the presentation of statements of operation at more frequent intervals than is feasible in general accounting. In production detailed costs when compared with standard or budgetary figures enable management to know when specific costs are under control. In sales an analysis of costs enables management to better control the functions of selling, delivery, and collecting. Moreover, unless costs are known, the management cannot act intelligently in adjusting production to market price or in adjusting selling price to the buyer's demand for the product. In all cases cost accounting offers data which permits the management to make decisions in terms of the effect upon unit costs and hence upon profits.

Costs may be classified as follows:

1. Production costs, consisting of
   a. Direct material
   b. Direct labor
   c. Manufacturing overhead
2. Distribution costs, consisting of
   a. Selling
   b. General and administrative

These five are assembled not only by their respective groups but by departments. This enables management to control costs by production and distribution centers and to delegate responsibility.

In general there are two methods of accumulating costs, the process and the specific order systems. In both, expenses are classified by departments. They differ, however, in the manner of determining the product's unit cost. Under the process system the unit cost is an average. This method is used when the products are indistinguishable and are manufactured as a result of successive operations. In contrast the specific order system accumulates costs for each product and is used when the products are different and are manufactured as a result of assembling the various parts.

Control should be exercised not only over processes, departments, or products, but also over specific costs. This may be

made effective through a system of internal check and through the analysis of cost statements.

Questions

Review.

1. Name and describe briefly five accounts in the general ledger which control detailed costs in a factory cost accounting system.
2. What is the purpose of a system of internal check?
3. What are the principal operations involved in controlling materials? Outline a system of internal check indicating how the following forms assist in the control of material cost:

    a. Purchase requisition
    b. Purchase order
    c. Invoice
    d. Receiving record
    e. Stores ledger sheet
    f. Material requisition

4. What are the usual operations in controlling labor cost? Discuss a system of internal check stating how the following forms aid in exercising control over labor cost:

    a. Clock card
    b. Daily time report
    c. Direct labor payroll

5. Is a close distinction between direct and indirect costs important in a process cost accounting system? In a specific order system?
6. Why is a normal distribution rate used for apportioning manufacturing overhead?
7. Describe briefly the computation of the following distribution rates:

    a. Direct labor-hour rate
    b. Labor cost rate
    c. Machine-hour rate

8. In general should a normal distribution rate based on cost or time be used for the distribution of manufacturing overhead?
9. What do distribution expenses include?
10. Outline briefly the steps to be taken in controlling distribution costs.
11. Give two reasons why cost accounting statements are preferable to statements ordinarily prepared from a financial accounting system.

Suggested Supplementary Readings

For a brief treatment of cost accounting:

BURTON, N. L.: "Introduction to Cost Accounting," Longmans, Green & Company, New York, 1936.

SCHLATTER, C. F.: "Elementary Cost Accounting," John Wiley & Sons, Inc., New York, 1927.

For a detailed treatment of cost accounting:

BLOCKER, J. G.: "Cost Accounting," McGraw-Hill Book Company, Inc., New York, 1940.

DOHR, J. L., H. A. INGRAHAM, and A. L. LOVE: "Cost Accounting," The Ronald Press Company, New York, 1935.

LAWRENCE, W. B.: "Cost Accounting," Prentice-Hall, Inc., New York, 1937.

NEUNER, J. J. W.: "Cost Accounting," Business Publications, Inc., Chicago, 1938.

REITELL, C., and C. E. JOHNSTON: "Cost Accounting," International Textbook Company, Scranton, Pa., 1937.

SANDERS, T. H.: "Cost Accounting for Control," McGraw-Hill Book Company, Inc., New York, 1934.

VAN SICKLE, C. L.: "Cost Accounting," Harper & Brothers, New York, 1938.

WILLCOX, R. S.: "Cost Accounting," Business Publications, Inc., Chicago, 1934.

CHAPTER XIV

STATEMENT ANALYSIS

In the preceding chapters emphasis has been placed on the proper recording and presentation of business transactions. This, of course, is an essential prerequisite to the analysis of financial statements. Unless transactions have been accurately recorded and the statements have been honestly and competently prepared in such a way as to disclose the significant facts of the enterprise, no technique of analysis, however refined, can be relied upon to present results which either investors, creditors, or management can accept with confidence. The interpretation of financial statements, however, is of more immediate importance to these three groups than either the recording or the presentation of accounting data; for it is upon the analysis of business records that policies and activities are largely based.

In the analysis of statements the viewpoints of investors, creditors, and management vary. The investor is primarily interested in the safety of his investment and the profit he hopes to realize. The creditor is chiefly concerned with the ability of the enterprise to pay its obligations when they fall due. The management, while interested in these two viewpoints, is concerned with the broader outlook of strengthening finances and increasing profits.

Techniques of Analysis.—Techniques of analysis may be classified in two groups. First are those which compare items, or groups of items, taken from statements of the same date. These relationships, known as *ratios*, are usually stated in percentage form, although sometimes as decimals or fractions.

Ratios[1] may be conveniently divided into those which are prepared from data in .

[1] No attempt is made to offer a comprehensive survey of ratios. For a detailed discussion see Stephen Gilman, "Analyzing Financial Statements," The Ronald Press Company, New York, 1934.

1. The balance sheet
2. The profit and loss statement
3. Both statements

The second technique consists of comparing items, or groups of items, with those of a preceding period in order to establish a *trend*.

Standards of Comparison.—The success of either technique depends on the use of proper standards of comparison; lacking these, ratios or trends are of limited significance. These standards may be based on data taken either from the records of the business or from outside sources dealing with comparable enterprises.

Ordinarily the most useful base of comparison is that of past performance. This base is essential to the establishment of a trend and will be the subject of discussion in the succeeding chapter.

Standards drawn from outside sources[1] provide valuable means for comparing enterprises. The bases must, however, be carefully chosen in order to be certain that they are appropriate, that the items are comparable, and that proper features are emphasized. The capital structure of an insurance company, for example, differs greatly from that of a railroad, and it is to be expected that an analysis of each would stress different items in the respective statements. Differences in enterprises due to size, to geographical location, and to seasonal or cyclical variations require care in the selection of standards. These and other differences prevent the interpretation of statements from being a routine procedure.

Purpose and Limitations of Ratio Analysis.—In the analysis of financial statements ratios are valuable means of diagnosis,

[1] Among the important sources of standards obtained from outside sources the following should be mentioned: financial manuals, particularly Moody's, Poor's, and those of the Standard Statistics Company; financial magazines, such as *Barron's*, the *Commercial and Financial Chronicle*, and the *Magazine of Wall Street;* departments of the Federal government, especially the Bureau of Foreign and Domestic Commerce; publications of trade associations and data obtainable from correspondence with the associations' secretaries; publications of credit agencies, notably Dun and Bradstreet (their special studies contain valuable ratio standards); bureaus of business research; and the files of public accountants.

although in themselves they are not significant. When, however, they are compared with appropriate standards and the relationship is explained, they can be used to indicate financial and operating strength or weakness.

Two limitations in the use of ratios should be noted. First, the ratio must be selected which will best express a comparison between significant financial or operating elements. What these elements are depends on the purpose to be served by the analysis. Creditors, for example, might well be interested in the ratio of current assets to current liabilities—they would not ordinarily be as interested in the ratio of advertising to sales.

Second, unless good judgment is exercised in the application of the ratio, the conclusions of the analysis are of questionable benefit. The blind acceptance of a 2 to 1 standard as the desirable relationship between current assets and current liabilities without considering the limitations of the ratio is misleading.

Balance Sheet Ratios.—*The ratio of current assets to current liabilities* is undoubtedly the most widely known balance sheet ratio. Expressed algebraically, and substituting the figures in the illustration on page 223, it is as follows:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{\$45{,}000}{\$23{,}250} = 1.9 \text{ to } 1$$

The purpose of this ratio is to indicate the ability of the enterprise to pay its obligations. The excess of the current assets over the current liabilities, or working capital,[1] offers some measure of the protection afforded creditors.

As a rough criterion of debt-paying ability, it is useful. It is misleading, however, to accept an arbitrary rule-of-thumb standard such as the widely used 2 to 1 ratio as an inflexible basis for passing judgment on the solvency of a business. The amount of working capital needed in a business is just that amount which is enough to pay all obligations as they fall due. If more than the necessary amount is kept on hand, the capital is not being

[1] The term "working capital" should be used with care. The definition given here conforms with the tentative definition given by the Special Committee on Terminology of the American Institute of Accountants, and also with long usage. The term "working capital" is sometimes employed, however, to refer to total current assets, and the term "net working capital" to refer to the excess of current assets over current liabilities.

employed to best advantage and the proprietors are not receiving the return that they might on the capital invested. If less than enough working capital is maintained, the enterprise is, of course, risking bankruptcy.

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BALANCE SHEET WITH PERCENTAGE COMPUTATIONS

December 31, 19__

	Amount	Percentage of Total
Assets		
Current Assets:		
Cash	$ 5,000	3.1
Accounts receivable	20,250	12.8
Notes receivable	2,000	1.2
Merchandise inventories, December 31, 19__	17,250	10.9
Prepaid expenses	500	0.3
Total current assets	$ 45,000	28.3
Fixed Assets:		
Land	$ 6,000	3.8
Buildings (net)	40,000	25.2
Machinery and equipment (net)	65,000	40.9
Furniture and fixtures (net)	2,750	1.7
Total fixed assets	$113,750	71.6
Total assets	$158,750	100.0
Liabilities and Net Worth		
Current Liabilities:		
Accounts payable	$ 15,000	9.4
Notes payable	7,500	4.7
Accrued expenses	750	0.5
Total current liabilities	$ 23,250	14.6
Long-term Liabilities:		
First mortgage bonds payable	25,000	15.7
Total liabilities	$ 48,250	30.3
Net Worth:		
Common stock	$100,000	63.0
Surplus	10,500	6.6
Total net worth	$110,500	69.6
Total liabilities and net worth	$158,750	100.0

The amount of working capital required varies not only between enterprises but also in the same business according to

seasons and according to the business cycle. Furthermore this ratio offers no test of the rapidity of turnover of current assets and current liabilities. If current assets are converted into cash slowly and current liabilities mature quickly, a 2 to 1 ratio may prove inadequate.[1]

The *ratio of quick assets to current liabilities* (the "acid-test" ratio) is a variation of the ratio of current assets to current liabilities. When essential data are secured from the illustration on page 223, this ratio appears as follows:

$$\text{Acid ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}} = \frac{\$27{,}250}{\$23{,}250} = 1.2 \text{ to } 1$$

Quick assets include all the current assets except inventories. Only cash available for the payment of debts and notes and

[1] This point has been discussed as follows:

"A merchant who is granted a 60-day credit on a bill of goods by wholesalers, for example, may be able to turn his stock-in-trade into cash completely within a 30-day period. How much capital need such a merchant have in his business? None, it is answered, because the returns from his sales will always be sufficient to pay his debts. The merchandise stock will turn twice before his bills fall due. A renewal of his stock at the end of 30 days need cause him no worry, as it likewise can be turned into cash before payment is due. An investment in working assets will be required here only if the conditions change, either through slowing of the stock turnover caused by seasonal variations, or through the shortening of the credit terms extended to him by wholesalers.

"If, then the business is thus self-sustaining, what becomes of the popular two-to-one liquidity ratio? Has it any meaning other than a desire to compel the entrepreneur to insure his stock at least one-half of its value for the benefit of creditors? But why 50%? Some merchandise shrinks 75% and even more at forced sales.

"Turning now to the other extreme, take the case of a merchandise stock turnover of twice yearly, coupled with a credit extension of 10 days from wholesalers. If it requires six months to sell the entire original stock, and if it is customarily renewed as sold, and if the merchandise must be met in 10 days, the owner must invest an amount equal to far more than one-half of the average inventory as a matter of financial necessity. The liquidity ratio must be much greater than two-to-one. True, if the profits are sufficiently great to pay back the entire cost within 10 days granted by the wholesaler, a two-to-one ratio might suffice. But such gains are inconsistent with current merchandising." Gregory, H. E., "Accounting Reports in Business Management," p. 209, The Ronald Press Company, New York, 1928.

accounts receivable resulting from normal trading activities should be included.

This ratio is particularly useful in indicating the debt-paying ability of the enterprise when large inventories are carried and if there is any doubt about its valuation or how rapidly it may be converted into cash. Special attention should be given to the amount of receivables since their collectibility is an important consideration in determining whether the assets are in fact "quick."

The arbitrary standard often used is the ratio of 1 to 1: for every dollar of current liabilities there should be a dollar of quick assets to pay for them. Both the ratio of current assets to current liabilities and the ratio of quick assets to current liabilities indicate a condition of short-run solvency.

In contrast the *ratio of net worth to total assets* is an index of solvency from the long-run point of view.

From the essential data from the balance sheet on page 223, this ratio is computed as follows:

$$\frac{\text{Net worth}}{\text{Total assets}} = \frac{\$110{,}500}{\$158{,}750} = 70 \text{ per cent}$$

In general the larger the percentage of total asset investment furnished by the owners, the greater the protection afforded creditors and the less likelihood of failure due to inadequate working capital.

Another valuable ratio which may assist in determining long-run solvency is that of *net worth to fixed assets.* This ratio is computed as follows:

$$\frac{\text{Net worth}}{\text{Total assets}} = \frac{\$110{,}500}{\$113{,}750} = 97 \text{ per cent}$$

An increase in the proportion of net worth invested in fixed assets should be closely watched. Overinvestment in fixed assets is more difficult to remedy than in current assets for, while items within the current asset group can be liquidated within a comparatively short time and the error corrected, investment mistakes made within the fixed asset group cannot be remedied so easily since the life span of the asset is so much longer. Consequently the opportunity to amend these investment errors must be postponed to a later date. The difficulty of overinvestment in fixed assets lies not only in the unbalanced financial structure

but also in the increase of such fixed charges as depreciation, insurance, and taxes—all of which continue regardless of the income earned during the period.

Other balance sheet ratios emphasizing special features of solvency or the distribution of the investment among the various assets may be worked out. These depend on the special relationships to be emphasized and the person for whom the analysis is being made.[1]

Significant relationships may be noted from an examination of a balance sheet by means of percentage computations. These computations may be helpful in determining whether the investment has been prudently distributed among receivables, inventories, or fixed assets. A disproportionate investment in any of these may indicate a serious business ailment.

Profit and Loss Ratios.—In recent years there has been a shift from the importance formerly accorded the balance sheet to a greater emphasis on the accounting requirements and the analysis of the profit and loss statement.[2]

The *operating ratio* is one of the most widely used of those prepared from data within the profit and loss statement. It is expressed as follows:

[1] Two ratios widely used and designed to show the proportion of investment supplied by the owners or creditors are those of net worth to total liabilities and total liabilities to total assets.

[2] The following excerpt from a letter is an expression of this viewpoint. "It is probably true that the accounting principles should be determined and an accounting system organized with a view to securing an accurate profit and loss figure and that the balance sheet is only a by-product of an accurate statement of profit and loss."

The shortcomings of the balance sheet audit and the unfortunate reliance that investors have placed upon the balance sheet as an index of the soundness of investments have led many to minimize the significance of the balance sheet and to emphasize the importance of the profit and loss statement. The accounting requirements of these two statements may be closely related. Costs furnish an illustration. In the balance sheet they appear as a series of charges deferred to future periods (fixed assets), in the profit and loss statement as the portion applicable to the current fiscal period (depreciation). Both statements are essential if adequate information about the financial structure and operations of the enterprise is to be given. Moreover the profit and loss statement is probably no less susceptible to manipulation than is the balance sheet. For an account of various methods of income manipulation see B. Graham and D. L. Dodd, "Security Analysis," Chaps. 31–34, McGraw-Hill Book Company, Inc., New York, 1940.

$$\text{Operating ratio} = \frac{\text{Cost of goods sold} + \text{Operating expenses}}{\text{Total net sales}}$$

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PROFIT AND LOSS STATEMENT WITH PERCENTAGE COMPUTATIONS

For the Year Ending December 31, 19__

	Amount	Percentage of Sales
Sales (net)	$275,000	100.0
Cost of goods sold	214,000	77.8
Gross profit	$ 61,000	22.2
Operating expenses:		
Selling expenses:		
Salesmen's salaries	$ 28,000	10.2
Advertising	8,300	3.0
Bad debts	2,820	1.0
Sundry selling expenses	1,280	0.5
Total selling expenses	$ 40,400	14.7
General administrative expenses:		
Office salaries	$ 6,500	2.4
Depreciation of furniture and fixtures	600	0.2
Insurance	1,750	0.6
Taxes	1,150	0.4
Sundry general administrative expenses	750	0.3
Total general administrative expenses	$ 10,750	3.9
Total operating expenses	$ 51,150	18.6
Net operating profit	$ 9,850	3.6
Nonoperating items:		
Interest expense	$ 1,450	0.5
Less interest income	325	0.1
Net nonoperating expenses	$ 1,125	0.4
Net profit	$ 8,725	3.2
Disposition of net profit		
Dividends	$ 5,000	
To surplus	$ 3,725	

When essential information from the illustrative statement on this page is interpolated, the ratio computed from these data is as follows:

$$\frac{\$265{,}150}{\$275{,}000} = 96 \text{ per cent}$$

This ratio shows the relation between cost and selling prices in the company and indicates the adequacy of the revenue to cover the operating costs incurred.

Closely related to the operating ratio as an index of efficiency in operation is the *ratio of net (or operating) profit to sales.* This indicates how much of every dollar of sales results in profit. It is computed as follows:

$$\frac{\text{Net profit}}{\text{Net sales}} = \frac{\$9{,}850}{\$275{,}000} = 3.58 \text{ per cent}$$

A common method of showing relationships within the profit and loss statement is to compute various expense and revenue groups as a percentage of sales (see page 227). When compared with corresponding figures of a preceding period, it is most useful in disclosing expense trends.

Interstatement Ratios.—The third group of ratios are those prepared from data in the balance sheet and in the profit and loss statement. These indicate the profitableness of the investment in the business.

Outstanding among the interstatement ratios is the *ratio of earnings to total assets.* This is expressed as follows:

$$\frac{\text{Earnings}}{\text{Total assets}}$$

After substituting the necessary figures from the two statements in this chapter, the ratio would be

$$\frac{\$8{,}725}{\$158{,}750} = 5.5 \text{ per cent}$$

This ratio is particularly important since it indicates the success of management in terms of the rate of earnings on all assets.

Similar relationships may be computed to show the rate of earnings on groups of equities. Typical of these is the *ratio of earnings to proprietorship* expressed as follows:

$$\frac{\text{Earnings}}{\text{Proprietorship}} = \frac{\$8{,}725}{\$110{,}500} = 7.9 \text{ per cent}$$

This ratio is, of course, significant to the owner for it shows the return received on his capital balance at the end of the fiscal period. This ratio is frequently computed according to types of stockholders. It is often considered more important, when computing these ratios, that earnings from major operations be used instead of net profit. The reason for this is to eliminate exceptional elements—such as nonoperating income and expenses—since by doing so the profitableness of the investment or any portion of it can be judged in terms of recurring income and expenses.

Turnover ratios are similar to those of earning power in that they indicate the effectiveness with which the assets are being utilized. If, for example, the investment in the inventory turns over once during the fiscal period and a profit results, the profit will be doubled if the inventory investment turns over twice and the same rate of profit prevails. The more often such transactions of turnovers can be profitably repeated within a fiscal period, the more profitable is the investment in the asset in question.

The turnover of all the capital invested in the business is expressed by the *ratio of sales to total assets.* Again, using appropriate data from the two statements in this chapter, this would be computed as follows:

$$\frac{\text{Net sales}}{\text{Total assets}} = \frac{\$275{,}000}{\$158{,}750} = 1.7 \text{ times}$$

This indicates how effectively all the capital of the enterprise has been utilized.

Another ratio, used even more perhaps than the one just discussed, is the *merchandise turnover ratio.* If the inventory is valued at cost, it is expressed as the proportion of cost of goods sold to the average inventory; if valued at selling price, it is shown as the proportion of sales to the average inventory.[1]

[1] Caution should be exercised in the comparison of inventory turnover ratios. For example, there is a greater margin between cost and selling price in the products of industries producing typewriters than there is in the products of meat-packing industries. In order to realize the same return on the capital invested, it is to be expected that the inventory turnover would be greater in the later instance than in the former.

The inventory turnover ratio for the illustration in this chapter is computed as follows (assuming $20,000 for the January 1, 19__, inventory):

$$\frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$214,000}{\$18,625} = 11.5 \text{ times}$$

Care should be taken to be certain that the inventory is representative of merchandise on hand throughout the year. If it is abnormally high or low, the resulting ratio will not, of course, typify conditions which usually prevail.

Turnover ratios for accounts receivable, current assets, and fixed assets may be very significant. Like other turnover ratios, they indicate the effectiveness of the investment in particular groups of assets and, if prudently used, may be helpful in disclosing overinvestment in them.

Questions

Review.

1. Explain why the accurate recording, presentation, and summarization of business data are important prerequisites to the analysis of statements.
2. What two techniques of analysis are widely used?
3. Why are standards of comparison important in statement analysis?
4. What is the purpose of statement analysis? What are its limitations?
5. What ratios may be used to indicate the following:

   a. Short-run solvency
   b. Long-run solvency
   c. The adequacy of revenue received from major operations
   d. Profitableness of sales
   e. The earning power of
      (1) Total assets
      (2) Proprietorship
      (3) Specific asset groups
   f. The effectiveness of utilizing the investment in
      (1) Total assets
      (2) Merchandise
      (3) Accounts receivable

6. Explain how statements with percentage computations can be used to advantage in statement analysis.

CHAPTER XV

STATEMENT ANALYSIS.—(*Concluded*)

While the development of techniques to aid in determining desirable or undesirable business conditions is important, it is equally significant to know the trend of finances and operations. It is quite possible for the condition of an enterprise to be satisfactory as judged by a single, or several ratios, and at the same time for the trend to be unsatisfactory.

Ratios and Trends.—Significant trends may be disclosed from an examination of the same ratios for successive years. Assume, for example, that in a given enterprise the ratios of quick assets to current liabilities for several years appear as follows:

1937	3.2 to 1
1938	3.3 to 1
1939	2.2 to 1
1940	2.4 to 1
1941	1.6 to 1

The last ratio of 1.6 to 1 may be quite adequate, but the management might well consider whether the causes for the decline in this ratio as disclosed by the trend are such as to continue. While not conclusive in itself, this device does suggest a point of departure for a more thorough investigation.

Balance-sheet Comparisons.—The comparative balance sheet (page 232), showing increases or decreases in asset, liability, or proprietorship items, is invariably used as the basis for determining financial trends. The usual method of classifying and presenting these changes is in the form of the statement of source and application of funds (page 233).[1]

[1] This statement, or some variation of it, is known by several other titles. Among these are "statement of funds," "analysis of changes in financial position," "application of funds statement," and the "statement of new assets and their application." The term "funds" as used in the present discussion refers to balance sheet changes that give rise to sources and applications of values for a given fiscal period.

The principal difference between the statement of source and application of funds illustrated in this chapter and more elaborate forms lies in the adjustments made to eliminate transactions which do not represent a flow

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Comparative Balance Sheet

	December 31, 19A	December 31, 19B	Increase
Current Assets:			
Cash	$ 5,000	$ 6,200	$ 1,200
Accounts receivable	20,250	24,300	4,050
Notes receivable	2,000	3,000	1,000
Merchandise inventories	17,250	26,000	8,750
Prepaid expenses	5,000	7,500	2,500
Total current assets	$ 49,500	$ 67,000	$17,500
Fixed Assets:			
Land	$ 6,000	$ 6,000	
Buildings (net)	40,000	38,000	$ 2,000*
Machinery and equipment (net)	65,000	72,400	7,400
Furniture and fixtures (net)	2,750	2,150	600*
Total fixed assets	$113,750	$118,550	$ 4,800
Total assets	$163,250	$185,550	$22,300
Current Liabilities:			
Accounts payable	$ 15,000	$ 22,000	$ 7,000
Notes payable	7,500	5,000	2,500*
Accrued expenses	750	1,250	500
Total current liabilities	$ 23,250	$ 28,250	$ 5,000
Long-term Liabilities:			
First mortgage bonds payable	$ 25,000	$ 30,000	$ 5,000
Total liabilities	$ 48,250	$ 58,250	$10,000
Net Worth:			
Common stock	$100,000	$100,000	
Surplus	15,000	27,300	$12,300
Total net worth	$115,000	$127,300	$12,300
Total liabilities and net worth	$163,250	$185,550	$22,300

* Decrease.

Note: In the comparative statements in this chapter 19A refers to the earlier year and 19B to the later year.

of funds. One of the major groups of these transactions consists of adjustment to net profit for such items as bad debts, depreciation, and amortization of intangibles. These items do not represent outlays of funds. Instead, they are allotments of past expenditures to a particular fiscal period. Similarly charges to surplus arising from asset revaluations result in no flow of funds. For a detailed discussion of the subject see H. A. Finney, "Prin-

THE MILLER CORPORATION

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

DURING THE YEAR 19B

Sources of funds:		
Decreased assets:		
Buildings	$ 2,000	
Furniture and fixtures	600	
		$ 2,600
Increased liabilities:		
Bonds payable		5,000
Increased proprietorship:		
Surplus		12,300
		$19,900
Application of funds:		
Increased assets:		
Net increase in working capital	$10,000	
Prepaid expenses	2,500	
Machinery and equipment	7,400	
		$19,900

A statement of changes in working capital (see below) usually accompanies the source and application of funds statement. The net increase or decrease in working capital shown as one figure is more significant in the source and application of funds statement than is a list of the current assets and current liabilities shown in full. The detailed items may be arranged in the following form:

STATEMENT OF CHANGES IN WORKING CAPITAL

Increase in working capital:		
Increases in current assets:		
Cash	$1,200	
Accounts receivable	4,050	
Notes receivable	1,000	
Inventories	8,750	
Decreases in current liabilities:		
Notes payable	2,500	
		$17,500
Decreases in working capital:		
Increases in current liabilities:		
Accounts payable	$7,000	
Accrued expenses	500	
		7,500
Net increase in working capital		$10,000

ciples of Accounting" (Intermediate), Chaps. 29 and 30, Prentice-Hall, Inc., New York, 1934.

The statement of source and application of funds indicates the movement of financial values in the enterprise. Sources of these values are as follows:

1. A decrease of assets brought about by
   a. The reduction of working capital
   b. The sale of fixed or other assets
2. The increase of liabilities by
   a. Using long-term liabilities
3. The increase of proprietorship resulting from
   a. Earnings from operations or other sources
   b. Capital investments of the owners
   c. Gifts to the organization

Values are applied as follows:

1. To the increase of assets by
   a. Increasing working capital
   b. Purchasing a fixed or other asset
2. To the decrease of liabilities by
   a. Reducing long-term liabilities
3. To the decrease of proprietorship by
   a. Losses from operations or for other reasons
   b. Payments of dividends, retirement of capital stock, or other decreases of the capital investment
   c. Donations by the organization

Favorable and Unfavorable Financial Trends.—The statement of source and application of funds is designed to present financial data in a form which permits the evaluation of methods of financing used by the enterprise. The principal means of corporate financing are as follows:

1. Reinvestment of profits
2. Short-term notes
3. Bonds
4. Stocks

Of these four the reinvestment of profits, the "New England" method, is the most conservative, since no claims of either principal or interest need be paid in the future.

When the earnings of the enterprise permit, this method can be used equally well to finance current or fixed assets. The working

capital position is strengthened when funds obtained from profitable operations are used to increase current assets or decrease current liabilities. Similarly the investment of profits in fixed assets is a most conservative method of financing, since there are no futúre claims for repayment of the amounts invested.

Short-term notes, on the other hand, require that the funds invested from this source be repaid within a brief period of time. Herein lies the principal danger in their use. The criterion of self-liquidation is the standard to be applied to investments from the proceeds of notes. They can properly be used only when the assets purchased are sold prior to the maturity of the note and the proceeds realized are applied to its payment.

One of the most unfavorable of all financial trends is that of using funds secured from short-term borrowing to purchase fixed assets. The proceeds of such an investment are frozen in the asset for a period longer than the maturity date of the note. Consequently, if the note is paid, funds must be secured elsewhere.

A similar situation arises when short-term notes are used to reduce or pay off mortgages or other long-term liabilities. The proceeds, once paid out, are not recoverable for the payment of the note when it matures.

Most of the difficulties inherent in the use of short-term notes can be overcome through the use of bonds or other forms of long-term indebtedness. The principal distinction between a note and a bond, so far as the trend of funds is concerned, is a question of maturity. The use of proceeds secured from bonds, however, does not carry with it the same dangers when the amount is placed in fixed assets as is the case with short-term notes, because a return can ordinarily be forthcoming from the investment before the bonds mature. The investment of funds secured from bonds to increase current assets or decrease current liabilities represents a favorable trend from the standpoint of improving the working capital position.

When an alternative of stocks or bonds may be used, the former may prove preferable to bonds in securing funds for investment in either current or fixed assets. Stocks carry no legally enforceable promise to pay for the principal amount; bonds do. Dividends may be passed on common stock and often in certain types of preferred stock, whereas interest on bonds cannot ordinarily be passed without serious consequences.

THE MILLER CORPORATION

COMPARATIVE PROFIT AND LOSS STATEMENT

	December 31 19A	Percentage of Total	December 31 19B	Percentage of Total	Increase
Sales (net)	$275,000	100.0	$280,000	100.0	$5,000
Cost of goods sold	214,000	77.8	218,000	77.9	4,000
Gross profit	$ 61,000	22.2	$ 62,000	22.1	$1,000
Operating expenses:					
Selling expenses:					
Salesmen's salaries	$ 28,000	10.2	$ 29,500	10.5	$1,500
Advertising	8,300	3.0	10,200	3.6	1,900
Bad debts	2,820	1.0	3,150	1.1	330
Sundry selling expenses	1,280	0.5	1,350	0.6	70
Total selling expenses	$ 40,400	14.7	$ 44,200	15.8	$3,800
General administrative expenses:					
Office salaries	$ 6,500	2.4	$ 7,200	2.6	$ 700
Depreciation of furniture and fixtures	600	0.2	600	0.2	
Insurance	1,750	0.6	1,775	0.6	25
Taxes	1,150	0.4	1,175	0.4	25
Sundry general administrative	750	0.3	1,250	0.4	500
Total general administrative	$ 10,750	3.9	$ 12,000	4.2	$1,250
Total operating expenses	$ 51,150	18.6	$ 56,200	20.0	$5,050
Net operating profit	$ 9,850	3.6	$ 5,800	2.0	$4,050*
Nonoperating items:					
Interest expense	$ 1,450	0.5	$ 1,475	0.5	$ 25
Less interest income	325	0.1	390	0.1	65
Net nonoperating expenses	$ 1,125	0.4	$ 1,085	0.4	$ 40*
Net profit	$ 8,725	3.2	$ 4,715	1.6	$4,010*

* Decrease.

Funds secured from the sale of fixed assets and applied to the increase of current assets or the decrease of current liabilities improves the position of working capital. The wisdom of this trend, however, depends upon whether the operations have in any way been impaired from the disposition of the fixed asset.

Profit and Loss Comparisons.—The comparative profit and loss statement (page 236) usually furnishes the basis for an analysis of the earnings trend. The fact that a profit or a loss has been made during a fiscal period, while important, is probably no more significant to management or investors than is a knowledge of the trend of earnings for several years past. For this reason supplementary information about the trend of earnings might well accompany statements of profit and loss.

A technique for the analysis of variations in net profit may be a useful aid in interpreting this trend. The variation in profit may be explained as being due to three causes: changes in the volume of sales, changes in the cost of the goods sold, and changes in operating and other expenses. The principal sections of the profit and loss statement, it will be recalled, are as follows:

Sales	xxx
Less cost of goods sold	xx
Gross profit	xx
Less expenses	xx
Net profit	x

An increase in net profit, for example, may be due to one or more of the following causes:

1. An increase in the revenue from sales
2. A decrease in the cost of goods sold
3. A decrease in expenses

The analysis of the variation in net profit in the illustration under discussion may be made as shown on page 238.

In this type of analysis, when two years are being compared, the earlier year is taken as the base. The change in gross profit due to the increase in the volume of sales is determined by obtaining the difference ($5,000) and multiplying this figure by the percentage of gross profit earned in the base year (22.18 per cent), to obtain the amount of $1,110.

The decrease in gross profit due to the increased cost of goods sold is determined by comparing the current year's cost of goods

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STATEMENT OF VARIATION IN PROFIT

Change in gross profit due to sales volume:		
Sales in 19B	$280,000	
Sales in 19A	275,000	
Increase in sales volume	5,000	
Increase in gross profit due to increased sales volume		$1,110
Change in gross profit due to variation in cost of goods sold:		
Cost of goods sold for 19B	$218,000	
Cost of goods sold on 19A basis	217,890	
Decrease in gross profit due to increased cost of goods sold		110
Net increase in gross profit		$1,000
Net increase in expenses		5,010
Decrease in net profit		$4,010

sold ($218,000) with what it would have been had the same relation existed between the cost and selling prices in the last year as in the former one. Had the same percentage prevailed, the cost of goods sold in the last year would have been 77.8 per cent of sales ($280,000), or $217,890.

Finally the increase in the operating and other expenses for the two periods is determined and the net decrease in profit is shown.

This technique, like the other described in this chapter, does not offer a conclusive explanation. It does, however, disclose significant trends and indicates to the management the direction in which its attention should be applied.

Summary.—The interpretation of accounting statements is of more immediate significance to management than either the recording or summarization of business transactions, since policies and activities are based largely upon the analysis of business transactions. Proper recording and summarization are important prerequisites, however, for, unless the statements are honestly and competently prepared, the results will be of questionable significance.

Techniques of analysis may be divided into those concerned with the establishment of relationships between items or groups of items and those concerned with the establishment of trends.

The successful use of either technique depends upon proper standards of comparison. These may be based upon the past performance, or they may be drawn from outside sources. In the latter case, particularly, care must be taken to be certain that the standards are appropriate.

The first technique of analysis, the establishment of relationships by using ratios, is a valuable means of diagnosis when employed with proper standards of comparison. Two limitations of ratios should be noted: first, the ratio must be selected which will best express a comparison between significant elements; second, its successful use requires sound judgment based on a knowledge of the business.

Ratios may be conveniently divided into those computed from data in the balance sheet, from data in the profit and loss statement, and from data taken from both statements.

In the balance sheet two ratios are widely used to indicate a condition of short-run solvency: that of current assets to current liabilities and that of quick assets to current liabilities. The relationship of net worth to total assets is a useful aid to indicate the long-run solvency of the enterprise.

In the profit and loss statement the operating ratio is widely accepted as a criterion of managerial efficiency and the ratio of net profit to sales as an indicator of the profitableness of the business.

Of the relationships computed from data taken from both statements, the ratios of earning power and turnover are generally most useful.

It is quite possible for the condition of a business to be adjudged satisfactory according to ratios and at the same time for the trend to be unsatisfactory. The usual method for determining the financial trend of an enterprise is to employ the comparative balance sheet in order to ascertain increases and decreases in asset, liability, and proprietorship items and to classify these changes in a statement of source and application of funds.

The comparative profit and loss statement furnishes a basis for the analysis of the earnings trend. Another helpful technique is the analysis of the variation in net profit due to changes in sales volume, changes in the cost of the goods sold, and changes in operating and other expenses.

The use of ratios and analytical devices to determine trends of financing and operations are essential techniques for the analyst. Techniques, however, must be clearly distinguished from the interpretation of statements. In order to interpret, the analyst must not only be familiar with the various techniques but must also have a knowledge of the business, be able to select the most significant aspects of the enterprise for analysis, choose appropriate standards for comparison, and, finally, use sound judgment in the interpretation of the results.

Questions

Review.

1. How can ratios be used in establishing trends?
2. Explain how comparative statements can be used as a device in determining trends.
3. What is the statement of source and application of funds?
4. Give a classification of the sources and the means of applying funds.
5. Discuss the favorable and unfavorable financial trends when the following methods of raising capital are used:
   a. Reinvestment of profits
   b. Short-term notes
   c. Bonds
   d. Stocks

Discussion.

6. "Financial and operating statements are historical. They reflect past transactions; hence any analysis of them is of little significance." Evaluate.

Suggested Supplementary Readings

Bolon, D. S.: "Introduction to Accounting," Chaps. 32 and 33, John Wiley & Sons, Inc., New York, 1938.

Cole, W. M.: "The Fundamentals of Accounting," Chap. 20, Houghton Mifflin Company, Boston, 1921.

Husband, G. R., and O. E. Thomas: "Principles of Accounting," Chaps. 31 and 32, Houghton Mifflin Company, Boston, 1935.

Kester, R. B.: "Principles of Accounting," 4th ed., Chap. 26, The Ronald Press Company, New York, 1939.

Paton, W. A.: "Essentials of Accounting," Chap. 38, The Macmillan Company, New York, 1938.

Porter, C. H., and W. P. Fiske: "Accounting," Chap. 21, Henry Holt & Company, Inc., New York, 1935.

Rorem, C. R.: "Accounting Method," Chaps. 38 and 39, University of Chicago Press, Chicago, 1930.

Special books on statement analysis:

BLISS, J. H.: "Management through Accounts," The Ronald Press Company, New York, 1924.

GILMAN, S.: "Analyzing Financial Statements," The Ronald Press Company, New York, 1934.

GREGORY, H. E.: "Accounting Reports in Business Management," The Ronald Press Company, New York, 1928.

GUTHMANN, H. G.: "The Analysis of Financial Statements," Prentice-Hall, Inc., New York, 1936.

WALL, A., and R. W. DUNING: "Ratio Analysis of Financial Statements," Harper & Brothers, New York, 1928.

PROBLEMS

CHAPTER II. Basic Statements

Problem 1

William Davis, the proprietor of a haberdashery, began business on January 1, 19__, with the following asset, liability, and proprietorship items:

Cash	$ 525
Merchandise	3,250
Furniture and fixtures	675
Accounts payable	735
William Davis, capital	3,715

Instructions: Show by means of the basic accounting equation the condition of the business January 1.

Problem 2

Six months later, June 30, 19__, the account balances were

Cash	$ 650
Merchandise	3,475
Furniture and fixtures	690
Accounts payable	680
William Davis, capital	4,135

Instructions:

a. Prepare a balance sheet as of June 30, 19__.

b. Can the profit or loss made by Davis for the 6 months be determined by comparing his capital account on June 30 with his account on January 1? Why?

Problem 3

During the 6-month period from January 1 to June 30, 19__, the revenue and expenses were

Sales	$15,265
Cost of goods sold	13,330
Salesman's salary	660
Telephone	30
Rent	600
Miscellaneous expenses	25

Instructions: From the above data prepare a profit and loss statement for Davis's business for the period from January 1 to June 30, 19__.

Problem 4

On January 20, 19__, Davis placed an additional cash investment of $500 in the business, but by April of the same year it was apparent that the cash balance carried was more than necessary, so on April 7 he withdrew $700.

Required: A statement of change in net worth of Davis's business from January 1, 19__, to June 30, 19__. Refer to problems 1, 2, and 3 for additional information necessary to prepare this statement.

Problem 5

At the close of business December 31, 19__, the George Washington Bank shows the following asset, liability, and proprietorship balances:

Cash in vault and due from banks	$15,500,000
Bank building	1,350,000
United States Government bonds	15,750,000
State and municipal securities	2,250,000
Other securities	300,000
Loans and discounts	10,750,000
Capital stock	2,700,000
Deposits	42,000,000
Surplus	1,625,000
Furniture and fixtures	135,000
Real estate	200,000
Other assets	90,000

From these balances prepare a balance sheet.

Problem 6

The following revenue and expense data are taken from the adjusted trial balance of John Ashley December 31, 19__. From them and a closing merchandise inventory of $10,000 prepare a profit and loss statement for the year.

Merchandise inventory, January 1, 19__	$ 13,000
Merchandise inventory, December 31, 19__	10,000
Purchases	75,000
Store salaries	8,300
Telephone and telegraph	400
Sales discounts	150
Salesmen's commissions	3,000
Bad debts	500
Depreciation of office furniture and fixtures	300
Income from security investments	225
Sales	100,000
Transportation in	300
Sales returns and allowances	2,000
Purchase returns and allowances	1,300
Store supplies used	700
Office salaries	5,800

Advertising	1,000
Purchase discounts	175
Loss on sale of fixed asset	2,000

Problem 7

On June 30, 19__, the following balances were taken from the records of Curtis and Bates:

Cash	$1,500
Notes receivable	750
Accounts receivable	400
Merchandise inventory, June 30, 19__	5,400
Furniture and fixtures	400
Notes payable	450
Accounts payable	650
B. A. Curtis, capital	3,820
J. D. Bates, capital	2,470
Sales	6,200
Cost of goods sold	4,700
Salaries expense	450
Interest income	25
Interest expense	15

The profit for the period (shared equally) has not been distributed. On April 7, 19__, Curtis made an additional investment of $400; on May 3, 19__, Bates withdrew $350. The fiscal period is for 6 months.

Required:

a. A balance sheet
b. A profit and loss statement
c. A statement of change in proprietorship

Problem 8

The following balances were taken from the records of the Elliott-Pembroke Corporation on December 31, 19__:

Cash	$ 10,000
Accounts receivable	35,000
Merchandise inventory	50,000
Land	8,000
Buildings and equipment	80,000
Office equipment	5,000
Accounts payable	27,500
Notes payable	5,000
Mortgage payable	25,000
Capital stock	100,000
Surplus	18,000
Sales	250,000
Cost of goods sold	200,000
Selling expenses	17,500
General administrative expenses	15,000

At the end of the year the surplus account was increased by the profit earned and decreased $5,000 by the dividends declared from it.

Required:

a. A balance sheet
b. A profit and loss statement for the year ending December 31, 19__.
c. A statement of change in surplus.

CHAPTER III. Basic Books

Problem 9

On January 1, 19__, William Scott started business with the following assets, liabilities, and proprietorship:

Cash	$21,000
Furniture	2,000
Equipment	3,500
Notes payable	2,500
William Scott, capital	24,000

One month later the same asset and equity accounts showed the following balances:

Cash	$10,800
Furniture	2,500
Equipment	4,500
Buildings	10,000
Land	4,000
Notes payable	1,500
Mortgage payable	6,000
William Scott, capital	24,300

During the month, Scott withdrew $200 cash from the business and turned over furniture worth $500 to the business as an added investment.

Required:

a. A balance sheet showing the condition of the business January 1, 19__.
b. A balance sheet showing the condition of the business January 31, 19__.
c. Show how changes in the asset and equity elements might occur. Start your explanation by opening a T account for each item contained in the list of accounts January 1. Assume changes that might have taken place in these accounts during the month so that each account balance will be equal to the amount shown in the balance sheet January 31.

Problem 10

To illustrate the desired procedure for this problem, the first transaction is recorded in the following form. Analyze the remaining transactions in the same manner.

Transaction Number	Name of Account	Asset Liability or Proprietorship	Increase or Decrease	Debit or Credit	Amount of Change
(1)	Cash	Asset	Increase	Debit	$30,000
(1)	Wilson, capital	Proprietorship	Increase	Credit	30,000

(1) Arthur Wilson invests $30,000 cash in a business.
(2) Land costing $2,000 is purchased for cash.
(3) A building costing $7,500 is erected and paid for in cash.
(4) Equipment to the amount of $2,500 is purchased for cash.
(5) The proprietor withdraws $1,500 cash for his personal use.
(6) Merchandise costing $5,000 is purchased from J. W. Bates, as follows: cash, $2,500; notes payable, $500; balance on account.
(7) Sales are made to R. C. Walker on account, $2,000; for cash, $750.
(8) R. C. Walker, a customer, pays $500 on account.
(9) J. W. Bates, a creditor, is paid $750 on account.
(10) A 30-day 6 per cent note for $1,000 is given by R. C. Walker to apply on his account.

Problem 11

Following the same instructions as in problem 10, analyze these transactions:

(1) William Brown starts business with a cash investment of $5,000.
(2) Rent is paid in advance, $100.
(3) Merchandise is purchased for cash, $2,500; on account, $1,750.
(4) Furniture and fixtures amounting to $500 are purchased on account.
(5) A delivery truck is purchased for $1,250 cash.
(6) A carpenter is paid $35 to make the necessary alterations in the truck body.
(7) A typewriter costing $120 is purchased for cash.
(8) Merchandise is sold for cash, $1,250; on account, $3,150.
(9) A loan of $500 (secured by a 30-day 6 per cent note) is obtained from the bank.
(10) A note of $450 is received from a customer.
(11) Payments are made to creditors amounting to $850.
(12) Cash amounting to $1,250 is received from customers.
(13) Gasoline and oil amounting to $10 are purchased for cash for the delivery truck.
(14) The delivery truck has proved unsatisfactory and is sold for $1,200 cash (ignore depreciation).
(15) Another truck is purchased for $1,500 cash.
(16) The store clerk's salary is paid, $80.
(17) The $500 note given to the bank (9) is paid by Mr. Brown from his personal funds as distinguished from the funds of the business.

(18) A creditor, who had overcharged $5, refunds this amount.
(19) A customer is given credit for goods returned valued at $30.
(20) A $25 cash contribution is made to the Community Fund.
(21) The typewriter, valued at $120, is stolen from the office.
(22) It is estimated that furniture and fixtures have depreciated $15.
(23) Merchandise, valued at $150, has so badly deteriorated that it is unfit for sale and is thrown away.
(24) Mr. Brown withdraws $75 cash.
(25) The merchandise remaining unsold is valued at $1,800.

CHAPTER IV. The Accounting Cycle

Problem 12

On January 31, 19__, the ledger account balances of William Edward's business were as follows:

Cash	$ 1,530
Accounts receivable	6,000
Notes receivable	500
Merchandise inventory, January 1	7,000
Buildings	20,000
Land	5,000
Accounts payable	1,000
Notes payable	750
William Edwards, capital	36,000
Sales	10,890
Sales returns	250
Purchases	8,000
Purchase returns	125
Selling expenses	325
General administrative expenses	175
Interest income	30
Interest expense	15

The transactions during February may be summarized as follows:

(1) Sales for cash, $3,250.
(2) Sales on account, $6,500.
(3) Sales returns, for cash, $125.
(4) Purchases for cash, $5,500.
(5) Purchases on account, $1,250.
(6) Purchase returns on account, $175.
(7) Cash disbursements for selling expenses, $375.
(8) Cash disbursements for general administrative expenses, $150.
(9) Cash disbursements for notes payable, $500.
(10) Cash disbursements for accounts payable, $750.
(11) Cash receipts from customers, $7,250.
(12) Cash receipts from interest on notes, $5.
(13) Borrowed $250 from the bank, giving them a 60-day 6 per cent note.
(14) Edwards withdrew cash, $2,500.

Required:

a. A trial balance as of January 31.
b. The journalization and posting of summary transactions for February. Set up T ledger accounts with opening balances. Identify each transaction by the appropriate number.
c. A trial balance as of February 28.

Problem 13

On January 1, 19__, Emanuel Francisco invested $500 cash in a vegetable stand business. He paid the monthly rental of $35 for the floor space occupied. He also paid $250 for display stands and other equipment and $15 to a carpenter to make necessary alterations and installations. On January 3, a vegetable supply costing $150 was purchased on account from the Globe Produce Company. During the month, additional supplies were purchased on account from the Globe Produce Company amounting to $300. Sales for cash totaled $650. The cost of vegetables spoiled and unfit for sale amounted to $12. Cash disbursements were as follows: clerk hire, $50; payments on account to the Globe Produce Company, $350.

Instructions:

a. Journalize, using only the following accounts: Cash; Equipment; Globe Produce Company; Emanuel Francisco, capital; Purchases; General expense; Sales.
b. Post to ledger accounts.
c. Foot the accounts.
d. Prepare a trial balance.
e. Submit a balance sheet and a profit and loss statement. (Vegetables on hand February 1 were valued at $125.)

Problem 14

Journalize the transactions in problem 10, post to ledger accounts, and submit a trial balance.

Problem 15

Journalize the transactions in problem 11, post to ledger accounts, and submit a trial balance.

Problem 16

On June 1, 19__, C. A. Woods began business with the following assets:

Cash	$2,500
Merchandise inventory	2,000
Furniture and fixtures	700
Buildings	1,500
Land	800

June 2. Purchased merchandise from B. A. Hoover amounting to $250; paid $150 cash and gave a 60-day 6 per cent promissory note for $100.

June 5. Purchased merchandise from A. C. William on account amounting to $35.75. Sold merchandise to A. D. Bartlett on account amounting to $75.50. Sales for cash, $1,040.

7. Purchased stationery and supplies for cash amounting to $5.25.

9. Sold merchandise for cash amounting to $500. Sold merchandise to D. V. Gaines on account amounting to $42.25.

12. Purchased merchandise amounting to $650 from C. D. Baker. Terms 2 per cent off for cash, net 30 days. Paid cash.

13. Received a check for $25 from A. D. Bartlett to apply on account.

14. Sold merchandise to H. C. Brittain on account amounting to $125.

15. Paid cash for postage, $1.75.

16. Purchased merchandise for cash amounting to $562.

19. Contributed merchandise (costing $15 and selling for $25) to the church bazaar.

22. Received a $50, 90-day 6 per cent note from H. C. Brittain.

23. Returned purchases made on June 12 amounting to $35 to C. D. Baker; purchased office fixtures for cash amounting to $12.50.

26. Sold merchandise on account to H. C. Brittain amounting to $250. Paid freight on the Brittain sale amounting to $7.25.

28. Purchased merchandise on account from C. D. Baker amounting to $125.50.

29. Received a check for $50 from A. D. Bartlett to apply on account.

30. Paid delivery expenses incurred amounting to $10.75. Paid clerk's wages amounting to $50.

Instructions:

a. Journalize.
b. Post to ledger accounts.
c. Foot the accounts.
d. Prepare a profit and loss statement (the merchandise inventory June 30 is $1,500).
e. Submit a balance sheet.

CHAPTER V. The Accounting Cycle.—(*Continued*)

Problem 17

Journalize the following adjustments as of December 31, 19__:

(1) The merchandise inventory at the beginning of the fiscal period, January 1, 19__, was $16,000. The goods on hand December 31, 19__, amount to $14,000.

(2) At the close of the fiscal period, wages amounting to $550 have been earned by the workers but will not be paid to them until the next fiscal period.

(3) Interest accrued on notes payable amounts to $23.

(4) Depreciation on furniture and fixtures amounts to $350.

(5) Cash advances have been made to workers amounting to $35.

(6) Estimated losses on bad debts amount to $345.

(7) On December 1, a noninterest bearing note receivable maturing the following January 30 was discounted at the bank. An interest

expense item of $15 was recorded at the time the note was discounted.

(8) On June 30, annual insurance premiums amounting to $180 were charged to the account insurance premiums.

(9) The rent income account includes $50 rent received in advance.

(10) Prepaid advertising amounts to $15.

(11) Interest accrued on notes receivable amounts to $50.

(12) Depreciation on delivery equipment amounts to $37.50.

(13) The balance of the office supplies account, as shown by the trial balance, is $325. An inventory of the supplies on hand discloses that the proper amount is $315.

(14) Interest collected in advance on notes receivable amounts to $12.50.

(15) The ledger account balance of cash on hand is $225. A count of the cash discloses an amount of $227.

Problem 18

Journalize the following adjustments as of December 31, 19__:

(1) The trial balance dated December 31, 19__, contains the beginning inventory (January 1) of $25,000. The inventory on hand at the close of the fiscal period, December 31, is $20,000.

(2) Estimated losses from bad debts are $200.

(3) On December 1 a 60-day noninterest bearing note maturing the following January 30 was discounted at the bank. The discount charge of $50 was recorded when the note was discounted.

(4) On December 15 rent expense amounting to $250 was paid for the month of January.

(5) On June 30 annual insurance premiums amounting to $120 were charged to the account insurance premiums.

(6) Interest accrued on notes receivable amounts to $25.

(7) Wages expense amounting to $750 has accrued, although the payroll will not be paid until the first week in January.

(8) The balance of the office supplies account in the trial balance is $625. An inventory of the supplies on hand shows that the value should be $475.

(9) Interest accrued on notes payable amounts to $17.50.

(10) Depreciation on machinery amounts to $350.

(11) On December 31, the rent income account includes $20 applicable to the month of January.

(12) Advertising expense amounting to $12.50 is prepaid.

(13) The cost of coal fuel during the year has been $1,250. Of this amount three-fourths has been consumed.

(14) Accrued interest payable on the mortgage is $125.

(15) The salary account includes $25 advanced to a stenographer on her January salary.

(16) Accrued salesmen's salaries are $47.50.

(17) Outstanding purchase discounts are $36.50.

(18) Outstanding sales discounts are $23.50.

(19) Accrued property taxes payable are $57.50.

(20) The partners' salaries for the year are $2,250 for J. Burton and $2,500 for A. Shaw. These salaries have neither been paid nor recorded on the books.

Problem 19

JOHN B. WILTON

TRIAL BALANCE, JUNE 30, 19__

Cash	$ 5,000	
Accounts receivable	2,750	
Reserve for doubtful accounts		$ 50
Notes receivable	1,200	
Merchandise inventory, January 1	2,250	
Furniture and fixtures	375	
Reserve for depreciation—furniture and fixtures		275
Land	4,000	
Buildings	17,500	
Reserve for depreciation—buildings		6,000
Accounts payable		1,600
Notes payable		500
John B. Wilton, capital		29,923
Sales		52,195
Purchases	48,000	
Salaries	7,800	
Delivery expenses	1,200	
Miscellaneous expenses	650	
Interest expense	8	
Interest income		15
Rent income		175
	$90,733	$90,733

Supplementary Data:

(1) Merchandise inventory, June 30, 19__, is $2,750.
(2) Depreciation of furniture and fixtures is estimated to be 10 per cent annually.
(3) Three per cent of outstanding accounts are estimated to be uncollectible.
(4) The salaries account includes $25 advanced to a worker on his July salary.
(5) Miscellaneous expenses not recorded amount to $15.
(6) Interest accrued on notes receivable amount to $10; on notes payable, $7.
(7) The rent income account includes an amount of $25 received in advance.

Required:

a. Adjusting entries
b. Appropriate accounts ruled and balanced

c. Closing entries journalized and posted to ledger accounts
d. Readjusting entries as of July 1, journalized and posted to ledger accounts

Problem 20

CHARLES BATES

TRIAL BALANCE, JUNE 30, 19__

Cash	$ 3,250	
Notes receivable	4,300	
Accounts receivable	11,950	
Merchandise inventory, January 1	20,500	
Insurance premiums	180	
Furniture and fixtures	2,750	
Accounts payable		$ 7,500
Notes payable		10,000
C. Bates, capital		27,100
Sales		30,600
Purchases	25,350	
Advertising	800	
Delivery expense	500	
Salesmen's salaries	2,800	
Rent expense	1,050	
Office salaries	900	
Office expense	700	
Interest expense	300	
Interest income		130
	$75,330	$75,330

Supplementary Data:

(1) Merchandise inventory, June 30, $24,500.
(2) A count of cash reveals a shortage of $5.
(3) Cash advances to office employees, $15.
(4) The rent account includes an amount of $150 paid on June 30 and applicable to the month of July.
(5) Unexpired insurance premiums, $60.
(6) Interest accrued on notes receivable, $25.
(7) Depreciation on furniture and fixtures, $75.
(8) Estimated uncollectible accounts, $225.
(9) Advertising prepaid, $65.
(10) Delivery expenses accrued, $50.
(11) Salesmen's salaries accrued, $120.
(12) Office supplies on hand, $350.
(13) Interest received in advance on notes receivable, $15.

Required:

a. Adjusting entries
b. The proper accounts ruled and balanced

c. Closing entries journalized and posted to ledger accounts
d. Readjusting entries journalized and posted to ledger accounts

CHAPTER VI. The Accounting Cycle.—(*Concluded*)

Problem 21

Set up a 10-column work sheet from the trial balance and supplementary data given in problem 19. Make the necessary adjustments, extensions, and rulings.

Problem 22

Follow the same directions given in problem 21 for the trial balance and supplementary data in problem 20.

Problem 23

JOHN WILLIAMS

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$ 5,225.00	
Accounts receivable	8,102.50	
Notes receivable	4,300.00	
Merchandise inventory, January 1, 19__	3,750.00	
Insurance premiums	800.00	
Stock of Pittsburgh Coal Company	5,000.00	
Land	6,275.00	
Building	23,500.00	
Furniture and fixtures	1,125.00	
Accounts payable		$ 10,430.00
Notes payable		2,000.00
Mortgage payable		22,500.00
John A. Williams, capital		21,100.00
John A. Williams, drawing	1,002.50	
Sales		118,230.00
Sales returns	2,225.00	
Purchases	99,000.00	
Freight in	1,380.00	
Store salaries	5,000.00	
Store expense	950.00	
Salesman's salary	1,700.00	
Delivery expense	1,400.00	
Warehouse expense	450.00	
Advertising	1,100.00	
Office expense	900.00	
Office salaries	1,300.00	
Interest income		75.00
Cash dividend (stock of Pittsburgh Coal Company)		150.00
	$174,485.00	$174,485.00

Supplementary Data, December 31, 19__:

(1) Inventories:

Merchandise, $4,236
Store supplies, $105
Office supplies, $85

(2) Interest accrued on notes receivable, $75.
(3) Insurance expense deferred, $276.
(4) Interest accrued on notes payable, $21.
(5) Interest accrued on mortgage payable, $1,350.
(6) Salary expense accrued:

(*a*) Store, $140
(*b*) Salesman, $68
(*c*) Office, $152

(7) Advertising booklets undistributed, $115.
(8) Estimated property taxes, $350.
(9) Depreciation rates:

(*a*) Furniture and fixtures—10 per cent
(*b*) Buildings—3 per cent

(10) Of the outstanding accounts receivable, 2 per cent are estimated to be uncollectible.

Required:

a. A 10-column work sheet
b. A profit and loss statement
c. A balance sheet
d. A statement of change in net worth
e. Adjusting entries in general journal form
f. Closing entries
g. A post-closing trial balance
h. Readjusting entries

Problem 24

THE DUTCH KITCHEN, INC.

TRIAL BALANCE, DECEMBER 31, 19—

Cash on hand	$ 2,000	
Cash on deposit	9,000	
Accounts receivable	54,000	
Reserve for doubtful accounts		$ 300
Merchandise inventory, January 1, 19—	13,800	
Investments	14,000	
Land	20,000	
Buildings	125,000	
Reserve for depreciation of buildings		18,750
Store furniture and fixtures	8,000	
Reserve for depreciation of store furniture and fixtures		2,400
Office furniture and fixtures	6,000	
Reserve for depreciation of office furniture and fixtures		1,800
Delivery equipment	5,000	
Reserve for depreciation of delivery equipment		2,000
Accounts payable		9,000
Notes payable		5,000
Capital stock		165,000
Surplus		27,250
Sales		601,000
Sales returns and allowances	6,000	
Purchases	404,700	
Purchase returns and allowances		3,500
Transportation in	2,800	
Store salaries	58,000	
Salesmen's commissions	33,000	
Transportation out	1,100	
Delivery truck expenses	2,900	
Store supplies	1,800	
Advertising	5,000	
Office salaries	44,000	
Heat, light, and water	8,000	
Office supplies	1,700	
Insurance expense	3,000	
Property taxes	2,000	
Telephone and telegraph	1,900	
Interest and discount expense	1,600	
Sales discounts	3,000	
Loss on sale of fixed assets	2,200	
Purchase discounts		2,900
Interest earned on investments		600
	$839,500	$839,500

Supplementary data:

(1) Merchandise inventory, December 31, 19__, $15,000.
(2) A reserve for bad debts equal to 2 per cent of accounts receivable is established.
(3) Depreciation is computed on the fixed assets for the past year at the following rates:

(*a*) Buildings—5 per cent
(*b*) Store furniture and fixtures—10 per cent
(*c*) Office furniture and fixtures—10 per cent
(*d*) Delivery equipment—25 per cent

(4) Interest expense accrued, $50.
(5) Prepaid advertising, $100.
(6) The $3,000 item charged to the insurance expense account represents the premium on a 2-year policy purchased on July 1 of this year.
(7) The following items are on hand December 31:

(*a*) Store supplies, $200.
(*b*) Office supplies, $100.

(8) Accrued interest on outside investments owned by the company, $80.
(9) Accrued salaries at the end of the year:

(*a*) Store salaries, $200.
(*b*) Office salaries, $150.

Required:

a. A 10-column work sheet
b. A profit and loss statement
c. A classified balance sheet

CHAPTER VII. Journal and Ledger Subdivisions

Problem 25

David Weldon operates a small wholesale business. All transactions are to be recorded in a general journal ruled as indicated below.

GENERAL JOURNAL

Accounts Receivable Dr.	Accounts Payable Dr.	General Ledger Dr.	F	Accounts and Explanations	F	General Ledger Cr.	Accounts Receivable Cr.	Accounts Payable Cr.

During the week of May 7 to 13, the following transactions occurred:

May 7. Purchased merchandise on account from J. V. Fisher, $300.
8. Sold merchandise on account to F. A. Rader, $200; to R. W. Foster, $150.
9. Purchased merchandise from W. S. Hart, $250 for which a 6 per cent 60-day note was given.
10. Returned $25 worth of merchandise purchased from J. V. Fisher.
11. W. E. Beck's account of $50 was considered worthless and written off.
12. Purchased merchandise from J. W. Reed for $500 and gave him a 6 per cent 60-day note for $250, the balance to be paid within 30 days.
13. Sold merchandise amounting to $750 to J. E. Walker who gave in payment a 6 per cent 30-day note for $250 and paid the balance in cash.

Problem 26

a. Prepare a purchase journal with the following columns: date, creditor, ledger folio, accounts payable. Journalize the following purchases on account and explain how postings should be made.

June 2.	From J. B. Thorp	$500
3.	From D. A. Brady	375
4.	From B. J. Hill	765
5.	From A. W. Davis	225
6.	From J. D. Sears	150

b. Set up a sales journal with the following columns: date, customers, ledger folio, accounts receivable. Journalize the following data and discuss briefly how postings should be made.

June 2.	To D. B. Scott	$ 250
3.	To J. M. Hart	325
4.	To R. J. Tate	1,250
5.	To H. V. Lane	500
6.	To O. D. Porter	800

c. Set up a cash receipts journal with the following columns: date, explanation, ledger folio, accounts receivable, sales discounts, miscellaneous, net cash. After journalizing the following cash receipts, explain how the postings should be made.

June 2. From D. B. Scott in payment of an account of $150 less 2 per cent discount.
3. From J. E. Fulton in payment of a note of $250 plus interest of $5.
4. From R. J. Tate in payment of an account of $750 less 2 per cent discount.
5. From the rent of a garage, $10.
6. From cash sales, $1,575.

d. Prepare a cash disbursements journal with the following columns: date, explanation, ledger folio, accounts payable, purchase discounts, mis-

cellaneous, net cash. Journalize the following cash disbursements and state how the postings should be made.

June 2. To B. J. Hill in payment of an account of $600 less 3 per cent discount.
3. For a new typewriter costing $120 to be used in the office.
4. For wages, $225.
5. To D. A. Brady in payment of an account of $300 less 3 per cent discount.
6. To J. D. Sears in payment of an account of $75.

Problem 27

On December 1, 19__, the trial balance of the Westbrook Corporation and the balances in the subsidiary ledgers were as follows:

WESTBROOK CORPORATION

Trial Balance, December 1, 19__

Cash	$ 5,000	
Notes receivable	1,500	
Accounts receivable	3,500	
Reserve for doubtful accounts		$ 25
Merchandise inventory, January 1, 19__	21,000	
Delivery equipment	2,500	
Reserve for depreciation of delivery equipment		250
Notes payable		500
Accounts payable		6,500
Capital stock		30,000
Surplus		3,815
Sales		48,750
Sales returns and allowances	255	
Purchases	47,500	
Purchase returns and allowances		125
Freight in	135	
Advertising	500	
Rent expense	2,200	
Salesmen's salaries	3,415	
Delivery expense	1,250	
Office salaries	700	
Insurance	200	
Telephone and telegraph	50	
Miscellaneous general expense	280	
Interest expense	20	
Sales discount	835	
Bad debts	15	
Interest income		15
Purchase discount		875
	$90,855	$90,855

Customers' Ledger

G. O. Brady	$ 125
R. D. Burns	625
A. C. Hart	250
J. G. Hay	325
D. E. Pond	370
W. A. Rider	250
O. A. Scott	275
R. W. Sears	430
L. R. Swift	100
A. B. Temple	750
	$3,500

Creditors' Ledger

C. H. Allis	$1,250
R. O. Hood	1,750
A. D. Jenkins	500
O. L. Spencer	1,500
H. V. Stone	1,500
	$6,500

Transactions for December have been journalized but not posted.

GENERAL JOURNAL

Date		Accounts and Explanations	F	General Dr.	Accounts Payable Dr.	General Cr.	Accounts Receivable Cr.
19—							
Dec.	5	R. O. Hood			150 00		
		Purchase returns and allowances				150 00	
		Memo 237					
	10	Notes Receivable		500 00			
		A. B. Temple					500 00
		90 days, 6 per cent dated Dec. 10					
	18	Sales returns and allowances		75 00			
		R. D. Burns					75 00
		Memo 167					
	25	H. V. Stone			250 00		
		Notes payable				250 00	
				575 00	400 00	400 00	575 00

PURCHASE JOURNAL

Date		Account	Terms	F	Accounts Payable Cr.	Cash Purchases Cr.	Purchases Dr.
19—							
Dec.	2	A. D. Jenkins	2/10, n/30		1,250 00		1,250 00
	5	Cash purchase				750 00	750 00
	8	C. H. Allis	2/10, n/30		2,250 00		2,250 00
	15	H. V. Stone	2/10, n/30		1,775 00		1,775 00
	18	R. O. Hood	30 days		250 00		250 00
	22	Cash purchase				500 00	500 00
	26	A. D. Jenkins	2/10, n/30		3,200 00		3,200 00
	30	R. O. Hood	30 days		1,150 00		1,150 00
					9,875 00	1,250 00	11,125 00

SALES JOURNAL

Date		Accounts	Terms	F	Accounts Receivable Dr.	Cash Sales Dr.	Sales Cr.
19—							
Dec.	2	J. G. Hay	2/10, n/30		1,500 00		1,500 00
	5	A. C. Hart	30 days		125 00		125 00
	7	Cash sales				1,300 00	1,300 00
	10	A. B. Temple	2/10, n/30		1,750 00		1,750 00
	12	O. A. Scott	30 days		250 00		250 00
	15	W. A. Rider	2/10, n/30		75 00		75 00
	20	R. D. Burns	2/10, n/30		1,500 00		1,500 00
	25	D. E. Pond	2/10, n/30		3,700 00		3,700 00
	29	Cash sales				2,000 00	2,000 00
					8,900 00	3,300 00	12,200 00

CASH RECEIPTS JOURNAL

Date		Accounts	Explanation	F	General Cr.	Cash Sales Cr.	Accounts Receivable Cr.	Sales Discount Dr.	Cash Dr.
19__									
Dec.	3	G. O. Brady	On account				50 00		50 00
	5	D. E. Pond	On account				250 00		250 00
	7	Cash sales				1,300 00			1,300 00
	10	R. W. Sears	On account				300 00		300 00
	12	J. G. Hay	On account				1,500 00	30 00	1,470 00
	15	L. H. Swift	On account				100 00		100 00
	18	A. B. Temple	On account				1,750 00	35 00	1,715 00
	23	A. C. Hart	On account				250 00		250 00
	25	Notes receivable	D. E. Pond		500 00				500 00
	25	Interest income	Note of D. E. Pond		5 00				5 00
	29	R. D. Burns	On account				1,500 00	30 00	1,470 00
	29	Cash sales				2,000 00			2,000 00
					505 00	3,300 00	5,700 00	95 00	9,410 00

CASH DISBURSEMENTS JOURNAL

Date		Account	Explanation	F	General	Cash Purchases	Accounts Payable Dr.	Purchase Discount Cr.	Cash Cr.
19__									
Dec.	1	Rent			200 00				200 00
	1	Notes payable	O. L. Spencer		500 00				500 00
	1	Interest expense			10 00				10 00
	3	R. O. Hood	On account				1,750 00	35 00	1,715 00
	5	Cash purchases				750 00			750 00
	12	Advertising			50 00				50 00
	18	C. H. Allis	On account				2,250 00	45 00	2,205 00
	22	Cash purchases				500 00			500 00
	25	H. V. Stone	On account				1,775 00	35 50	1,739 50
	28	Delivery expense			50 00				50 00
	30	Salesmen's salaries			715 00				715 00
	30	Office salaries			150 00				150 00
					1,675 00	1,250 00	5,775 00	115 50	8,584 50

Instructions: Submit a trial balance as of December 31, 19__, and lists of balances in the customers' and creditors' ledgers.

Problem 28

Thomas Black operates a men's clothing store. On August 1, 19__, the post-closing trial balance of his ledger appeared as follows:

Cash		$ 3,000	
Notes receivable		300	
Accounts receivable:			
J. H. Frederick	$ 50		
N. A. Bartlett	75		
A. D. Gainer	25		
F. D. Abbott	35		
R. W. Taylor	50		
W. E. Wallace	15	250	
Inventory, August 1, 19__		25,000	
Furniture and fixtures		1,250	
Accounts payable:			
Elite Clothing	$1,000		
Block and Block	500		
Seal Raincoat	750		
Cord Shoe	250		$ 2,500
Notes payable			500
Thomas Black, capital			26,800
		$29,800	$29,800

The ledger accounts to be used with the line space allotted to each are as follows:

Account	Line Space	Account	Line Space
Cash	17	Sales discounts	7
Accounts receivable (each)	7	Purchases	12
Notes receivable	10	Purchase returns	7
Inventory	7	Purchase discounts	7
Furniture and fixtures	7	Freight in	7
Accounts payable control	7	Clerk hire	7
Accounts payable (each)	7	Fire insurance	7
Notes payable	7	Rent expense	7
Black, capital	7	General expense	7
Sales	14	Interest expense	7
Sales returns	7	Interest income	7

During the month of August the following transactions occurred:

August 4. Paid $100 rent for the month. Paid $30 to cover insurance for August, September, and October.

5. Sent a check of $750 to Elite Clothing Company in payment on account, less the customary discount of 2 per cent.

6. Purchased men's suits costing $575 from Block and Block Tailors. Freight paid on the shipment amounted to $5. J. H. Frederick paid his account in full.

8. F. D. Abbott and R. W. Taylor paid their accounts in full.

9. Cash sales for the week amounted to $825. Cash purchases for the week amounted to $500.

August 11. Paid the Seal Raincoat account in full, less a 3 per cent discount. Frederick purchased $45 worth of merchandise on account.
12. Purchased shoes from the Cord Shoe Company amounting to $325.
13. Frederick was given credit for $10 worth of returned merchandise.
14. Wallace, a customer, sent a 60-day 6 per cent note for the balance of his account.
15. A note payable of $100 with interest of $5 was paid.
16. Cash sales for the week amounted to $1,025; cash purchases for the week, $150.
17. Bartlett bought additional merchandise on account, $25.
19. Gainer paid $10 on account.
21. Abbott purchased $55 worth of merchandise on account.
23. Wallace bought $80 worth of merchandise on account.
30. Wages of $80 were paid to a clerk.
31. From August 16 to August 31 cash sales amounted to $2,500. Cash purchases amounted to $1,250.

At the end of the month Mr. Black installed specialized journals for cash receipts, cash disbursements, and purchases, all to be started as of September 1. A specialized ledger was installed for accounts payable. The practice of granting credit to customers was discontinued and a discount of 4 per cent was offered for cash or for a promissory note. Frederick paid his bill in full; Bartlett paid $50 cash and gave a 60-day 6 per cent note dated September 1 for the balance; Gainer settled by a cash payment; Abbott gave a 30-day 6 per cent note dated September 1 for the balance of his account; Wallace paid $30 cash and gave a 60-day 6 per cent note dated September 1 for the balance of his account. (All these entries were made as of September 1, 19__.)

Summary Entries for September:

Cash Receipts: Cash sales for September amounted to $4,000.

September 7. Black invested $2,000 additional cash in the business.
10. Abbott paid his note with interest.

Cash Disbursements: Cash purchases for September amounted to $750.

September 1. Paid $200 rent for 2 months in advance.
3. Paid note of $200 with interest of $6.
5. Paid balance of Elite Clothing Company, no discount.
6. Paid balance of Block & Block account, no discount.
7. Paid balance of Cord Shoe Company, no discount.
10. Paid invoice of Elite Clothing Company, dated September 2.
13. Paid invoice of Cord Shoe Company, dated September 4.
18. Paid invoice of Elite Clothing Company, dated September 9.
20. Paid invoice of Block & Block, dated September 12.
30. Paid miscellaneous office supplies, $25.
Paid clerk hire, $85.

Purchases:

September 2. From Elite Clothing Company, goods purchased costing $250; terms, 3/10, n/30.
4. From Cord Shoe Company, goods costing $75; terms, 2/10, n/30.
9. From Elite Clothing Company, goods valued at $25; terms, 3/10, n/30.
12. From Block & Block Tailors, goods costing $350; terms, 2/10, n/30.
15. From Seal Raincoat Company, goods costing $250; terms, 2/10, n/30.
20. From Elite Clothing Company, goods costing $75; terms, 3/10, n/30.
30. From Elite Clothing Company, goods costing $125; terms, 3/10, n/30.

During September, purchase returns for cash amounted to $300; sales returns for cash amounted to $250.

Instructions:

a. Arrange the ledger accounts in the manner indicated.
b. Record the transactions for August in an ordinary two-column journal.
c. Journalize the transactions of September in special journals of your own design.
d. Post the journal entries for August and September to the ledger accounts.
e. Submit a trial balance and a list of accounts payable.

Problem 29

On June 1, 19—, the Bentwood Furniture Company decided to install a voucher system. This required the removal of all accounts payable from the general ledger, the elimination of the purchase journal, and altering the form of the cash disbursements journal. After these changes were made, the books of original entry and the special columns used in each were as follows:

Voucher Register: Date; Vendor; Voucher Number; Paid: Date, Check Number; Vouchers Payable (Cr.); Purchases, Kitchen Furniture (Dr.); Purchases, Dining-room Furniture (Dr.); Purchases, Living-room Furniture (Dr.); Purchases, Bed-room Furniture (Dr.); Purchases, Porch and Summer Furniture (Dr.); Purchases, Rugs and Carpets (Dr.); Selling Expense (Dr.); Administrative Expense (Dr.); and Sundries (Dr.). The last column has space for the title of the account, the ledger folio, and the amount.

Cash Receipts: Date; Account; Ledger Folio; Cash (Dr.); Sales, Kitchen Furniture (Cr.); Sales, Dining-room Furniture (Cr.); Sales, Living-room Furniture (Cr.); Sales, Bed-room Furniture (Cr.); Sales, Porch and Summer Furniture (Cr.); Sales, Rugs and Carpets (Cr.); and Sundries (Cr.). This

last space is divided into the following sections: account, ledger folio, and amount.

Check Register: Date, Account, Check Number, Voucher Number, Cash (Cr.), Purchase Discount (Cr.), Vouchers Payable (Dr.).

General Journal: Two-column form.

All sales are made for cash. Customers desiring credit are assisted by the management to make arrangements with a financing company.

The balance of the creditor's accounts on June 1, with a distribution of the purchases by departments, is as follows:

	Dining Room	Living Room	Porch and Summer	Rugs and Carpets
Standard Furniture Mills...........	$1,200			
Wildwood Lumber Company.......			$ 750	
Michigan Furniture Company......		$ 620		
Furniture Supply Company........			830	
Proctor Furniture Company........		400		
Brookside Antique Furniture.......	300			
Eastern Carpet Company..........				$450
	$1,500	$1,020	$1,580	$450

Each of these accounts is closed, given a voucher number and recorded in the voucher register (assume that each balance will be settled in full by a single payment).

Assume that the various purchase and sales accounts are in the ledger prior to the installation of the voucher system.

Transactions for the month are as follows:

June 1. Paid salaries for the month of May, $700; ($400 to selling and $300 to administrative expenses). Voucher 8, check No. 1. Paid the balance owed to the Michigan Furniture Company less a discount of $12.40. Voucher 3, check No. 2.

2. Purchased kitchen furniture from the Proctor Furniture Company for $200; terms, 2/10, n/30. Voucher 9.

3. Paid the Standard Furniture Mills for the balance owed less a discount of $24. Voucher 1, check No. 3. Paid the Press-Globe for newspaper advertising, $60. Voucher 10, check No. 4.

4. Purchased porch and summer furniture from the Wildwood Lumber Company for $550; terms, 2/10, n/30. Voucher 11. Paid Wilson Brothers, Stationers, $85 for office supplies. Voucher 12, check No. 5.

5. Sent a check to the Wildwood Lumber Company for $750. Voucher 2, check No. 6. Gave a 60-day 6 per cent note (dated June 5) for $300 to the Brookside Antique Furniture Company in settlement of the balance due to them on June 1. Voucher 6.

June 6. Paid the Proctor Furniture Company $392 in full payment of their account balance. Voucher 5, check No. 7. Paid the Furniture Supply Company the balance of their account less a discount of $16.60. Voucher 4, check No. 8.

7. Purchased bed-room furniture from the Michigan Furniture Company for $750; terms, 2/10, n/30. Voucher 13. Paid the Eastern Carpet Company $441 in full settlement of their account, voucher 7, check No. 9.

8. Cash sales for the week amounted to $3,200 distributed as follows: kitchen furniture, $325; dining-room furniture, $175; living-room furniture, $470; bed-room furniture $580; porch and summer furniture, $1,400, rugs and carpets, $250.

10. Paid voucher 9, check No. 10.

11. Drew a check to replenish the petty cash fund. Distribution of expenditures were as follows: miscellaneous selling expenses, $12.50; office supplies, $5; office expenses, $7.50; delivery expense, $5. Voucher 14, check No. 11.

12. Purchased porch rugs from the Eastern Rug Company for $175, terms, 2/10, n/30. Voucher 15.

13. Purchased a delivery truck from the Parker Motor Company for $1,200. Paid $700 cash and gave a 90-day 6 per cent note for the balance. Voucher 16, check No. 12.

14. Returned defective merchandise received from the Eastern Rug Company purchased on June 12 and received a credit of $35.

15. Cash sales for the week amounted to $2,880 distributed as follows: kitchen furniture, $150; dining-room furniture, $200; living-room furniture, $625; bed-room furniture, $350; porch and summer furniture, $1,075; rugs and carpets, $480. Paid voucher 13, check No. 13.

17. Purchased living-room furniture from the Michigan Furniture Company for $750, terms 2/10, n/30. Voucher 17. Paid the Wildwood Lumber Company $300 on the purchase of June 4, check No. 14.

18. Purchased porch and summer furniture from the Standard Furniture Company for $450, terms cash. Mailed them a check for the amount. Voucher 20, check No. 15.

19. Purchased a typewriter for cash from Wilson Brothers, Stationers, for $110. Voucher 21, check No. 16.

20. Purchased living-room furniture from the Brookside Antique Furniture Company for $125, terms, 2/10, n/30. Voucher 22.

21. Paid voucher 15, check No. 17.

22. Cash sales for the week amounted to $4,800 and were distributed as follows: kitchen furniture, $525; dining-room furniture, $425; living-room furniture, $630; bed-room furniture, $620; porch and summer furniture, $1,750; rugs and carpets, $850.

24. Returned defective merchandise received from the Brookside Antique Furniture on June 20 to the amount of $17.

June 25. Purchased kitchen furniture from the Proctor Furniture Company for $325, terms, 2/10, n/30. Voucher 23.

26. Purchased dining-room furniture from the Michigan Furniture Company for $875, terms, 2/10, n/30. Voucher 24.

28. Paid voucher 22, check No. 18.

29. Drew a check to replenish the petty cash fund. Distribution of expenditures were as follows: miscellaneous selling expenses, $15.75; office supplies, $12.50; delivery expense, $7.50. Voucher 25, check No. 19. Cash sales for the week amounted to $3,700 and were distributed as follows: kitchen furniture, $275; dining-room furniture, $380; living-room furniture, $580; bed-room furniture, $475; porch and summer furniture, $1,600; rugs and carpets, $390.

Instructions:

a. Journalize all transactions.
b. Indicate how postings are made from each journal.
c. Set up the vouchers payable controlling account.
d. Prepare a list of the unpaid vouchers in the voucher register.
e. Total and rule each journal.

CHAPTER VIII. Problems of Valuation

Problem 30

On December 31, 19__, the balance of the cash account in the ledger was $8,248.77. Outstanding checks totaled $545. A service charge of $1.27 was included in the bank statement but was not included in the cash account balance. A deposit of $342.50 made December 31 was included in the ledger account balance but was not included in the bank statement. The balance of the bank statement was $8,450. Prepare a bank reconciliation statement.

Problem 31

The bank statement balance of December 31, 19__, was $1,248.12. This balance included protest fees of $5. Deposits amounted to $419 for December 31, but this amount was not included in the bank statement. The checks outstanding totaled $362. The following errors were made on the check stubs: Check No. 757 was written for $250, on the check stub it was recorded as $252.50; check No. 712 was written for $153, and it was recorded on the check stub as $135. The balance of the cash account was $1,325.62. Prepare a bank reconciliation statement.

Problem 32

On December 31, 19__, outstanding accounts receivable amounted to $30,000. It was estimated that 2 per cent would be uncollectible. During the next fiscal period, all accounts were paid except an account amounting to $150. Submit necessary journal entries.

Problem 33

The Osborn Wholesale Company offers a discount of 2/10, n/30 to all its customers. On December 31, 19__, the outstanding sales discounts amounted to $800. Of this amount it was estimated that 75 per cent would be accepted. Accordingly, an allowance was created to recognize the outstanding discounts. During the next fiscal period, the discounts accepted amounted to $750. Submit journal entries.

Problem 34

On December 31, 19__, the balance of accounts payable was $25,000. All accounts were subject to a 2 per cent discount, and accordingly an allowance account was created to recognize the outstanding discounts. During the next fiscal period, accounts to the amount of $19,000 were paid within the discount period. The remaining accounts were paid later.

Problem 35

On September 1, 19__, *A* sells goods to *B* for $1,000. On September 15, *B* gives *A* a 60-day 6 per cent note (dated September 15) in settlement of the account. Thirty days later *A* discounts the note at the bank at a 6 per cent rate. Upon maturity, the note is paid. Journalize these data on the books of *A* and *B*.

Problem 36

On February 20, Wilson purchased merchandise which cost $2,500 from Williams. On March 1, Wilson gave Williams a 30-day 6 per cent note (dated March 1) for the amount of his purchase. On March 15, Williams discounted the note at the bank at a 7 per cent rate. Upon maturity, the note is dishonored and is returned by the bank after being formally protested. Protest fees amount to $2. Give the necessary journal entries on Williams' books.

Problem 37

On February 15, 19__, Black purchased from White merchandise costing $3,000. On March 1, Black gave White a 30-day 6 per cent note (dated March 1) for the purchase. On March 16, White discounted the note at a 5 per cent rate. On March 31, White received notice from the bank stating that Black had refused payment. White then paid the face value of the note, the interest, and a protest fee of $2.50. On May 15, shortly after the court declared Black bankrupt, all creditors received a final payment of 40 per cent in full settlement of their claims against Black. Submit dated journal entries on White's books.

Problem 38

On June 30, 19__, the merchandise inventory consists of 3,000 units. Data relating to purchases during the month are as follows:

Date	Quantity Purchased	Price per Unit
June 5	2,000	$2.25
8	1,250	2.25
13	700	2.30
18	1,500	2.35
24	800	2.40
28	1,000	2.40

From this information determine the inventory value based on the following methods:

a. Simple average
b. Weighted average
c. Recent purchase

CHAPTER IX. Problems of Valuation.—(*Concluded*)

Problem 39

On July 1, 19A, a machine with an invoice cost of $2,500 was delivered at an extra cost of $25. The installation charges were $75. The machine was estimated to have a scrap value of $150 and to have a life of 10 years. Subsequently, the machine proved to be unsatisfactory, and 1 year from the date of purchase it was sold for $2,000. The books are closed June 30 and December 31. Give all dated journal entries.

Problem 40

The Primrose Path Florist Shop purchased a delivery truck June 30, 19A, for $700. It had an estimated life of 4 years and a residual value of $100. After 3 years the truck was turned in as partial payment on the purchase of a new one. The price of the new truck was $800; the trade-in value of the old one was $275. Assuming the fiscal period to be the calendar year, give all necessary journal entries.

Problem 41

On January 1, 19A, 10 machines costing $5,000 each were purchased for cash. Each unit had an estimated life of 10 years. On January 1, 19F, it was decided to sell the 10 units and replace them with more efficient machines. The machines were operated until sold. On February 1, 19F, 6 were sold at $25 per unit more than their book value. The remaining machines were held until March 1, 19F, at which time they were sold as a lot for $6,875. The books are closed annually on December 31. Give all dated journal entries.

Problem 42

A machine which cost $11,000 has an estimated life of 5 years and a residual value of $1,000. It is estimated that during its life span it will produce 100,000 units.

Required:

a. Journal entries to show the annual depreciation charge (on a straight-line basis) and the disposition of the asset for $1,000 at the end of the 5-year period.
b. If 7,000 units were produced in a year, what entry would be required to record the annual depreciation on a production basis? Assume that the machine was disposed of after it had produced 100,000 units. What entries would be necessary?
c. Assume that the machine was sold for $1,500 at the end of the fourth year of operation. Give journal entries to record its disposition when depreciation is computed on a straight-line basis and when it is recorded on a production basis. Assume that the machine produced 82,000 units during the 4 years.

Problem 43

The Penn Coal Company purchased a coal deposit for $50,000. The deposit had an estimated recoverable output of 750,000 tons. During the first year of operation, 25,000 tons were mined. In April of the second year it became apparent that only 80 per cent of the estimated output could be recovered. Thirty thousand tons were mined during the second year.

Required:

a. The journal entry to record the depletion charge at the end of the first year of operations
b. The journal entry to revalue the coal deposit
c. The journal entry to record the depletion charge for the second year

Problem 44

On January 12, 19A, the Carleton Manufacturing Company paid $30,000 to the inventor for a patent. The company made additional disbursements of $6,500 in perfecting the patent up to December 31, 19A. In 19B it sued a competitor for infringement of patent rights, involving a cost of $4,000, but the jury disagreed and no verdict was rendered. In 19C the company again brought suit and was victorious, $5,000 damages being awarded. The cost of the second trial amounted to $3,500. The company was granted royalties from the defendant in the amount of $7,000 for 19C and $12,000 for 19B.

The patent was granted to the original inventor on January 3, 19A. No amortization of the patent, however, has been made up to December 31, 19C, due to the pending damage suits. The patent had a legal life of 17 years, but the Carleton Manufacturing Company decided to follow a conservative practice by writing off its cost over a period of 9 years. Assume that the fiscal period for the company coincides with the calendar year.

Instructions: Prepare journal entries for these transactions. What balance should the patent account finally show, assuming that no other patents were owned?

Problem 45

At the end of the sixth year of operations, December 31, 19F, the Carter Corporation had assets of $550,000, liabilities of $100,000, capital stock (original investment sold at par) $400,000, and surplus of $50,000. Assume that assets and liabilities were correctly stated, that the company was manufacturing a staple commodity, and that it had a good business reputation.

A fair rate of return for a company of this type was considered to be 10 per cent. The profits for the preceding 6 years were as follows:

19A	$10,000	19D	$70,000
19B	40,000	19E	75,000
19C	60,000	19F	75,000

When the Carter Corporation was sold to another company on December 31, 19F, the goodwill was computed by capitalizing the average excess profit of the preceding 6 years (the normal profit and excess profit for any year were computed in terms of the capital investment at the beginning of the year).

During the 6 years there were no additional capital investments. Withdrawals consisted of an 8 per cent cash dividend during each of the last 5 years; each dividend was declared on December 31.

Instructions: Compute the goodwill.

CHAPTER X. Individual Proprietorship and Partnership

Problem 46

Hagan and Dodge form a partnership with a capitalization of $75,000. Hagan invests $37,500 in cash. Dodge contributes the following assets: land, $5,000, buildings, $10,000, and equipment, $22,500.

Sometime later Kirby invests sufficient cash to acquire a one-third interest in the business. Prior to his entrance, however, the land account is decreased by $1,000 and the equipment account by $2,000. Give the necessary journal entries.

Problem 47

Reuben Bicken and Sylvester Complain are equal partners with capital accounts of $10,000 and $5,000, respectively. On September 30, 19__, Angus Anxiety acquires a one-third interest in the partnership by the payment of $8,000. On December 24 of the same year, Wesley Whimper is admitted to a one-fourth interest in the partnership by a payment of $10,000.

Required:

a. The journal entries required to record the admission of Anxiety if goodwill is placed on the books.

b. The journal entries to record the admission of Whimper if
   (1) Goodwill is placed on the books.
   (2) Goodwill is not placed on the books.

Problem 48

The articles of partnership of Davis and Scott contain the following provisions:

1. Davis is to receive an annual salary of $3,200, Scott a salary of $2,600. Salaries are to be considered a distribution of profit.
2. Each partner is to receive interest at 6 per cent per annum on the balance of his capital account at the close of the fiscal period.
3. After salaries and interest have been distributed, the remaining profit or loss is shared between Davis and Scott in the proportion of 60 and 40 per cent, respectively.

The net profit for the year (before salaries and interest were computed) amounted to $8,000.

Submit general journal entries to show the distribution of profit (or loss) to the partners.

Problem 49

The partnership agreement between Bristol and Logan provides for an equal division of profits or losses after interest at 6 per cent on the average capital invested has been computed. The partners' accounts appear as follows:

BRISTOL, CAPITAL

February 1	2,000	January 1 (balance)	30,000
July 1	1,000	March 1	1,000
August 1	1,500	September 1	4,000
October 15	1,600	December 1	2,500

LOGAN, CAPITAL

April 1	1,000	January 1 (balance)	50,000
June 15	3,500	March 1	5,000
July 1	1,500	October 1	4,000
September 1	2,000	December 1	2,000

The net profit for the period (before allowing for interest on investments) is $7,500.

Required:

a. The amount of interest credited to each partner.
b. The entries necessary to distribute the profit to the partners.

Problem 50

A and *B*, partners, decide to liquidate their business. *A* has a capital account balance of $10,000; *B* of $20,000. Profits and losses are shared equally. After the payment of all obligations and the realization of all assets, the cash available for distribution between the partners is $10,000. Give the necessary journal entries to show the liquidation of the business.

Problem 51

On June 30, 19—, Smith and Jones, who share profits and losses equally, decided to liquidate their partnership. Their balance sheet, on this date, appeared as follows:

Assets

Cash in bank	$ 7,500
Accounts receivable	23,000
Inventory	25,000
Plant and machinery	15,000
	$70,500

Liabilities

Accounts payable	$15,500
Notes payable	10,000
Smith, capital	30,000
Jones, capital	15,000
	$70,500

The assets of the partnership (except cash) were sold to Johnson for a cash payment of $45,000. The partners paid the firm's liabilities and closed the partnership books. Give all journal entries.

Problem 52

A, *B*, and *C* are partners with capital accounts (at the close of the fiscal period) of $20,000, $40,000, and $60,000, respectively. For several years the partnership had been operated at a loss, and the partners, fearing that the business would continue to be unprofitable, decide to liquidate. There are no outstanding liabilities when the partnership is liquidated. The assets are realized in the following order:

Installment 1	$21,000
Installment 2	15,000
Installment 3 (final)	37,500

Give all necessary journal entries and show the capital accounts ruled and balanced.

CHAPTER XI. Corporations

Problem 53

On March 1, 19—, the Forbes Corporation was organized with a capitalization of $100,000 common stock. On March 15, 750 shares (par $100) were sold for cash to *A* at 97 per share. On May 1, 150 shares were sold for cash to *B* at 102. Give all necessary journal entries on the books of the corporation.

Problem 54

The Marsh-Thomas Corporation was organized May 1, 19—, with an authorized capitalization of 10,000 shares of common stock, par value $100.

On May 15 A. C. Lane subscribed to 20 shares at 95. The agreement provided that 10 per cent was to be paid at the time the subscription was taken, the balance to be paid in three equal monthly installments beginning June 15. All subscriptions were paid and the stock certificates were issued.

Give the necessary journal entries.

Problem 55

The Grant Corporation has authorized common stock of 5,000 shares, par value $100, of which 4,000 shares are outstanding. In order to provide working capital, three stockholders agree to give 25 shares each to the corporation. Subsequently, the 75 shares of treasury stock are sold for $115 per share.

Submit journal entries.

Problem 56

The Craft-Ferber Corporation has an authorized issue of 10,000 shares of no-par stock of which 6,000 shares are outstanding. The corporation has a surplus of $50,000. On June 30, 19__, dividends amounting to $3 per share were declared. On July 15, the dividends were paid. On August 15, 10 additional shares of no-par stock were sold to C. W. Price for cash at $50 per share. On December 20, 20 more shares were sold to N. R. Barton for $30 per share.

Give dated journal entries.

Problem 57

On October 1, 19__, J. V. Kirk subscribed to 20 shares of common stock par $100 of the Lane Corporation to be paid in two equal monthly installments beginning November 1, 19__. Kirk paid the first installment but defaulted on the second.

Give the necessary journal entries if

a. No portion of the amount paid by Kirk is returned to him.
b. The entire subscription is sold by the corporation at 98 and after deducting $10 as selling expenses, the balance is returned to Kirk.
c. The corporation issues 10 shares of stock to Kirk and relieves him of further responsibility.

Problem 58

The Walker-Wilson Corporation sells its entire issue of $150,000, 10-year second-mortgage 5 per cent bonds for 97. Give entries to

a. Record the sale of the issue.
b. Record the interest on the bonds at the end of the first 6-month period.

Problem 59

The Rand-Baker Corporation sells its entire issue of $100,000, 15-year 5 per cent first-mortgage bonds at 102. Give entries to

a. Record the sale of the issue.
b. Record the interest on the bonds at the end of the first 6-month period.

Problem 60

The Warner Corporation authorizes an issue of $200,000 first mortgage, 4 per cent, 20-year bonds. Interest is payable semiannually on January 1 and July 1. The entire issue is sold at par to Johnson and Bates, investment bankers. The bond indenture provides for the maintenance of a sinking fund and a reserve for sinking fund.

Give journal entries to record:

a. The authorization of the bonds
b. The delivery of the bonds to the investment banker
c. The receipt of cash from the investment banker
d. The outstanding bonds
e. The payment of interest on the bonds for the first 6 months
f. The establishment of a sinking fund 6 months after the bonds are issued
g. The establishment of a reserve for sinking fund 6 months after the bonds are issued

Problem 61

On January 1, 19__, the Premier Corporation was incorporated with an authorized capital of 2,000 shares of common stock, par value $100 per share. The business of *A* and *B*, partners, was taken over by the corporation. Each partner was given stock equal to the balance of his capital account. The partnership balance sheet appeared as follows on January 1, 19__:

Assets		Liabilities and Proprietorship	
Cash	$ 5,000	Notes payable	$ 5,000
Notes receivable	7,500	Accounts payable	20,000
Accounts receivable	25,000	Mortgage	15,000
Merchandise inventory	40,000	*A*, capital	32,500
Furniture and fixtures	7,500	*B*, capital	32,500
Buildings	12,000		
Land	8,000		
	$105,000		$105,000

February 1 Brown subscribed to 50 shares of stock at 99. Ten per cent was paid at the time the subscription was taken. The balance was paid in two equal monthly installments after which the stock was issued.

March 1 White subscribed to 50 shares of stock at par. It was payable 50 per cent on March 8 and 50 per cent on March 20. White made the first payment but defaulted on the second. On March 25 the 50 shares were sold at 98. The expenses incident to the sale were $15. The amount realized in excess of the corporation's equity was returned to White.

July 30 Earnings for the fiscal period were $5,000. A 2 per cent dividend was declared to stockholders of record and paid 10 days later.

Directions:

a. Give the entries on the corporation's books to record the acquisition of the partnership.
b. Give all necessary dated journal entries on the books of the corporation to record the other data given.

Problem 62

Jones and Smith, equal partners, decided to expand their business. They succeeded in interesting Johnson, the local banker, to join them in organizing the Jones and Smith Corporation. The proposed corporation was to have an authorized capitalization of 3,000 shares, par value, $100. The partnership balance sheet prior to incorporation was as follows:

Cash	$ 10,000	Accounts payable	$ 15,000
Accounts receivable	20,000	Notes payable	5,000
Merchandise	35,000	Mortgage	20,000
Equipment	25,000	Smith, capital	55,000
Buildings	50,000	Jones, capital	55,000
Land	10,000		
	$150,000		$150,000

The assets of the partnership were accepted at book value by the corporation with the exception of the land account which was decreased $5,000. Jones and Smith received $10,000 for the goodwill of their partnership. They were paid in capital stock of the newly formed corporation.

Johnson subscribed to 1,000 shares at par. He was allowed $500 for his services as a promoter (and paid in the stock of the corporation). The balance he paid in cash.

Brown was given 100 shares (par $100) for patents which he turned over to the corporation.

Wilson, a creditor, accepted 80 shares at par in settlement of his $8,000 account.

Williams bought 50 shares at 99 and paid cash for his purchase.

Submit:

a. Entries to close the partnership books
b. Entries to open the books of the corporation, and record all data given
c. The balance sheet of the corporation after all transactions have been recorded

CHAPTER XII. Cost Accounting

Problem 63

The inventories of the Novelty Manufacturing Company, January 1, 19__, were as follows: materials, $6,000; work in process, $3,000; finished goods, $4,500. From January 1 to January 31 materials purchased amounted to $23,500; labor costs incurred totaled $25,000, consisting of $21,000 direct labor and $4,000 indirect labor; and manufacturing overhead totaled $11,000,

including the indirect labor and $2,000 of indirect materials, the remaining $5,000 being such items as heat, power, insurance, depreciation, and taxes. All direct labor and manufacturing overhead costs were applied to production.

On January 31, 19__, the inventories were materials, $5,000; work in process, $2,500; and finished goods, $3,500.

Instructions: Enter the above data in the following accounts: materials inventory, direct materials used, payroll, direct labor, manufacturing overhead, work in process inventory, finished goods inventory, and cost of goods sold. Transfer the items from one account to another as the various costs are incurred, transferred to production, completed, and sold. Assume that the materials inventory contains both direct and indirect materials and that the payroll account is charged each pay period with both the direct and indirect labor and then credited at the end of the month when the labor costs are distributed.

Problem 64

On September 1, 19__, the ledger of the Kringle Toy Company contained the following balances: materials inventory, $7,500, including both direct and indirect materials; work in process, $2,500; finished goods, $5,000. During September materials purchased for cash and charged to the materials inventory account totaled $17,500. The payroll account was charged with the weekly payrolls of $4,000, $3,800, $4,100, and $4,100, of which $12,500 was for direct labor and $3,500 for indirect labor to be distributed at the end of the month.

During September $10,000 of direct materials and $1,000 of indirect materials were applied to production. Manufacturing overhead items, in addition to indirect materials and indirect labor, totaled $4,000 and were paid in cash. The total cost of goods completed during the month was $29,000. Finished goods on hand September 30 amounted to $6,000. Sales for cash during September totaled $50,000. All labor and manufacturing overhead incurred was applied to production.

Instructions:

a. Prepare journal entries for the month of September.
b. Post to the ledger accounts after inserting the opening balances.
c. Rule and balance the accounts.

Problem 65

The Enterprise Company manufactures a product which is the result of three processes. After a prolonged shutdown, operations were resumed April 1, 19__. During the month of April, pertinent cost and operating data are as follows:

First Process.—Material which cost $2,890 was put in process, and labor and manufacturing overhead costs to the amount of $800 and $600, respectively, were expended. Four thousand units were started in process, 3,700 were completed and transferred to the second process, and 300, two-thirds completed, remained in the department.

Second Process.—To the units transferred from the preceding department, labor cost totaling $1,000 and manufacturing overhead amounting to $800 were applied. Of the 3,700 units received, 3,500 were completed and transferred to the succeeding department, and 200 remained in the second process, half finished.

Third Process.—In the last process, material costs of $1,300, labor costs of $460, and manufacturing overhead of $585 were applied to the units from the preceding department. Completed units totaled 3,200, and 300 units half finished remained in process.

Instructions: Prepare a summary cost statement (see page 184).

CHAPTER XIII. Cost Accounting.—(*Concluded*)

Problem 66

Enter the following transactions in the form indicated:

Transaction Number	Journal Entry on General Accounting Books	Record on Cost Accounting Forms

(1)	Material purchased for stores		$6,525
(2)	Direct material issued		5,215
(3)	Direct material returned to stores		250
(4)	Direct labor cost incurred		8,200
(5)	Wages paid		8,200
(6)	Direct labor applied to production		8,200
(7)	Indirect material issued from stores		1,275
(8)	Indirect material returned to stores		130
(9)	Indirect labor cost incurred and paid		2,640
(10)	Additional manufacturing overhead items, paid for in cash:		
	Repairs	$ 500	
	Light, heat, and water	1,215	
	Taxes	600	
	Compensation insurance	400	2,715
(11)	Transfer the individual manufacturing overhead items to the summary manufacturing overhead ledger account.		
(12)	Manufacturing overhead distributed to:		
	Department *A*		2,300
	Department *B*		1,800
	Department *C*		1,100
	Department *D*		1,300
(13)	Service departments *C* and *D* apportioned equally to producing departments *A* and *B*.		
(14)	Manufacturing overhead applied to production:		
	Department *A*		3,550
	Department *B*		2,900

Problem 67

On October 1, 19—, the ledger account balances of the Weldon Manufacturing Company were as follows:

Cash	$ 5,000	
Accounts receivable	7,000	
Materials	5,000	
Work in process	1,750	
Finished goods	3,500	
Machinery	27,000	
Buildings	15,000	
Land	3,250	
Accounts payable		$ 2,750
Reserve for doubtful accounts		175
Reserve for depreciation on machinery		1,645
Reserve for depreciation on buildings		765
Capital stock		50,000
Surplus		12,165
	$67,500	$67,500

Summary transactions for the month of October are as follows:

(1)	Material purchased on account for stores	$2,100
(2)	Direct material issued from stores	2,800
(3)	Indirect material issued from stores	1,600
(4)	Payroll for the month:	
	Direct labor—all entered to production	5,200
	Indirect labor	1,700

(5) Additional manufacturing overhead items, paid for in cash:

Water and power	$2,800
Repairs to machinery	1,000
Compensation insurance	700
Taxes	300
	$4,800

(6)	Transfer the individual manufacturing overhead items to the summary manufacturing overhead ledger account.	
(7)	Manufacturing overhead applied to production	8,060
(8)	Underapplied overhead expense	40
(9)	Work in process, October 31, 19—	4,250
(10)	Finished goods, October 31, 19—	2,200

Instructions:

a. Prepare general journal entries to record these summary transactions.
b. Submit a statement of cost to manufacture and cost of goods sold.

NOTE: In the direct material section of the statement of cost to manufacture, indirect materials used must be subtracted from the total materials

placed in production. This must be done because the materials inventory contains both direct and indirect materials. Since indirect material is an element of manufacturing overhead, it must be transferred to this cost classification.

Problem 68

The trial balance of the Cord-Fisher Corporation, February 1, 19__, is as follows:

Cash	$ 13,900	
Accounts receivable	34,750	
Reserve for doubtful accounts		$ 850
Inventories, February 1, 19__:		
Finished goods	3,500	
Work in process	3,000	
Materials	5,800	
Machinery and equipment	46,500	
Reserve for depreciation of machinery and equipment		25,350
Buildings	61,800	
Reserve for depreciation of buildings		15,600
Land	17,100	
Accounts payable		19,350
Capital stock		100,000
Surplus		25,200
	$186,350	$186,350

Summary transactions for February are as follows:

(1) Purchases of material on account		$ 7,200
(2) Material withdrawn from stores and chargeable to:		
Direct material		4,200
Manufacturing overhead (indirect material)		1,100
(3) Labor summarized from time tickets and charged to:		
Direct labor		5,600
Manufacturing overhead (indirect labor)		1,750
(4) Sales on account		21,000
(5) Cash receipts from accounts receivable		27,250
(6) Cash disbursements:		
Accounts payable (other than payroll)		6,200
Accounts payable (payroll)		7,350
Manufacturing overhead (items paid in cash other than indirect material and indirect labor):		
Light, heat, and water	$700	
Repairs to machinery and equipment	500	
Compensation insurance	250	
Taxes	175	1,625
Selling expenses		1,750
General administrative expenses		635

(7)	Uncollectible accounts receivable charged against the reserve for doubtful accounts	550
(8)	Depreciation on machinery and equipment (manufacturing overhead expense)	387
(9)	Depreciation of buildings	100
	Prorated as follows:	
	Manufacturing overhead ... $ 50	
	Selling expenses ... 25	
	General administrative expense ... 25	
	Total ... $100	
(10)	Increase in the reserve for doubtful accounts (general administrative expense)	700
(11)	Enter the direct material and direct labor costs into production.	
(12)	Transfer the detailed manufacturing overhead items to the summary manufacturing overhead account.	
(13)	The manufacturing overhead chargeable to production is 87 per cent of direct labor cost.	
(14)	Cost of goods completed during February	15,500
(15)	Cost of goods sold	14,700
(16)	Adjust for the underapplied manufacturing overhead expense.	
(17)	Close the revenue and expense items to the summary profit and loss account, and the final profit or loss to surplus.	

Required:

a. Journalize the transactions and post to ledger accounts. Set up the ledger with the accounts in their proper order. Do not set up detailed accounts for the selling and the general administrative expenses, but, in order to shorten the problem, open only two accounts for all of those departmental expenses—a selling expense account and a general administrative expense account. Keep the manufacturing items in detailed accounts.

b. Prepare a balance sheet and a profit and loss statement, supported by a statement of cost to manufacture and cost of goods sold (on this statement take account of the Note in part *b* of the instructions in problem 66).

CHAPTER XIV. Statement Analysis

Problem 69

THE WESTLAKE CORPORATION

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current:			
Cash		$ 12,650	
Marketable securities		28,425	
Notes receivable due from officers		11,500	
Notes receivable due from trade debtors		10,300	
Accounts receivable	$ 20,300		
Less reserve for bad debts	406	19,894	
Inventories		32,176	
Prepaid advertising		8,200	
Total current assets			$123,145
Fixed:			
Equipment and machinery	$448,500		
Less reserve for depreciation	46,125	$402,375	
Land and buildings	$178,350		
Less reserve for depreciation	53,350	$125,000	
Total fixed assets			527,375
Total assets			$650,520

Liabilities and Proprietorship

Current:		
Accounts payable	$ 13,200	
Notes payable due to banks	17,500	
Notes payable due to creditors	14,300	
Accrued expenses	8,250	
Total current liabilities		$ 53,250
Long Term:		
Mortgage payable		100,000
Net Worth:		
Capital stock	$400,000	
Surplus	97,270	
Total net worth		497,270
Total liabilities and proprietorship		$650,520

Discuss the condition of this company. Give reasons in support of your opinion.

Problem 70

On December 31, 19A, 1 year after its formation, the balance sheet of the Fairfax-Wilson Corporation appeared as follows:

Assets

Cash	$ 7,000
Notes and accounts receivable (less reserve)	23,000
Inventories	40,000
Buildings and equipment (less reserve)	110,000
Land	20,000
Total assets	$200,000

Liabilities and Proprietorship

Notes and accounts payable	$ 30,000
Mortgage payable	25,000
Preferred stock	25,000
Common stock	100,000
Surplus	20,000
Total liabilities and proprietorship	$200,000

Compute the significant ratios in this statement.

Problem 71

One year later (see problem 70) the balance sheet of the Fairfax-Wilson Corporation appeared as follows:

Assets

Cash	$ 15,000
Notes and accounts receivable (less reserve)	20,000
Inventories	45,000
Buildings and equipment (less reserve)	140,000
Land	20,000
Total assets	$240,000

Liabilities and Proprietorship

Notes and accounts payable	$ 20,000
Mortgage payable	25,000
Preferred stock	50,000
Common stock	100,000
Surplus	45,000
Total liabilities and proprietorship	$240,000

Compute the significant ratios in this statement.

Problem 72

Three years after its formation, the balance sheet of the Fairfax-Wilson Corporation was as follows:

Assets

Cash	$ 20,000
Notes and accounts receivable (less reserve)	35,000
Inventories	60,000
Buildings and equipment (less reserve)	140,000
Land	20,000
Total assets	$275,000

Liabilities and Proprietorship

Notes and accounts payable	$ 25,000
Mortgage payable	35,000
Preferred stock	50,000
Common stock	100,000
Surplus	65,000
Total liabilities and proprietorship	$275,000

Required:

a. The significant ratios for this statement.
b. Compare the ratios for problems 70, 71, and 72 to determine whether the financial position has improved. Assume that a dividend of $10,000 was paid January 20 of the third year.

Problem 73

The Chase-Borden Corporation shows the following results of operation for the year ending December 31, 19__:

Net Sales	$200,000
Cost of goods sold	150,000
Gross profit	50,000
Selling expenses	20,000
General expenses	16,000
Net profit from operations	14,000
Nonoperating expense	2,000
Net profit	$ 12,000

Compute significant ratios from this statement.

Problem 74

One year later the Chase-Borden Corporation showed the following results from operation for the calendar year:

Net sales	$260,000
Cost of goods sold	182,000
Gross profit	78,000
Selling expenses	30,000
General expenses	19,000
Net profit from operations	29,000
Nonoperating expenses	5,000
Net profit	$ 24,000

Compute significant ratios from this statement. Compare the ratios with those computed for problem 73.

CHAPTER XV. Statement Analysis.—(*Concluded*)

Problem 75

Prepare statements of source and application of funds from the data contained in problems 70, 71, and 72. Comment upon the method of financing.

Problem 76

Prepare a statement of variation in profit from the data in problems 73 and 74.

Problem 77

Comparative Balance Sheet of the Rand-Wilcox Manufacturing Company

	December 31, 19A	December 31, 19B
Assets		
Land	$ 5,000	$ 5,000
Buildings	25,000	32,000
Machinery	45,000	57,800
Delivery equipment	5,000	6,500
Unexpired insurance	150	50
Interest income accrued	15	25
Advertising prepaid		45
Goodwill	7,500	2,500
Raw materials	9,350	11,300
Goods in process	2,100	3,200
Finished goods	12,500	15,500
Accounts receivable	8,400	10,500
Notes receivable	4,000	3,500
Cash	5,600	8,200
	$129,615	$156,120
Liabilities, Reserves, and Proprietorship		
Capital stock, common	$ 50,000	$ 50,000
Capital stock, preferred	25,000	50,000
Notes payable	6,000	2,500
Accounts payable	7,500	4,300
Reserve for depreciation on buildings	6,000	7,500
Reserve for depreciation on machinery	8,500	10,250
Reserve for depreciation on delivery equipment	1,350	1,900
Reserve for doubtful accounts	420	525
First mortgage bonds	10,000	20,000
Surplus	14,845	9,145
	$129,615	$156,120

RAND-WILCOX MANUFACTURING COMPANY

COMPARATIVE PROFIT AND LOSS STATEMENT

	For the Year Ending December 31, 19A	For the Year Ending December 31, 19B
Sales	$135,000	$200,000
Cost of goods sold	110,000	160,000
Gross profit	25,000	40,000
Operating expense	17,500	30,200
Operating profit	7,500	9,800
Nonoperating expenses	2,000	3,000
Net profit	$ 5,500	$ 6,800

RAND-WILCOX MANUFACTURING COMPANY

STATEMENT OF SURPLUS

Year, 19B

Balance, January 1, 19B		$14,845
Less:		
Goodwill write down	$5,000	
Dividends	7,500	12,500
		$ 2,345
Plus profit for 19B		6,800
Surplus, December 31, 19B		$ 9,145

Required:

a. A comparative balance sheet with suitable asset, liability, and proprietorship groupings
b. A statement of source and application of funds
c. A statement of working capital
d. A statement of variation in profit
e. A narrative report giving your opinion of the business

Problem 78

I. Select a company having two balance sheets and two profit and loss statements of recent date. The profit and loss statement should contain a cost of goods sold figure separate from selling and general administrative expenses. These statements may be obtained from the company's report to stockholders or from the financial manuals of Moody's, Poor's, or the Standard Statistics Company.

II. Prepare the following statements:
   A. A comparative balance sheet
   B. A comparative profit and loss statement. It may be necessary to reclassify and change the sequence of items within the statements to suit the requirements of your analysis

C. A statement of source and application of funds
D. A schedule of working capital
E. A statement of surplus
F. An analysis of the variations in net profit

III. Submit a narrative report of the company commenting on the following aspects, if they are worthy of mention:
   A. The prospects for a prosperous or an unprofitable future within the industry
   B. The financial trend of the company, noting the following, if they are significant:
      1. Changes in proprietorship equity
      2. Changes in working capital
      3. Refinancing program
      4. Ratios of earning power for
         a. Capital invested by owners
         b. Current assets
         c. Fixed assets
         d. Receivables
         e. Inventories
      5. Turnover ratios for
         a. Current assets
         b. Fixed assets
         c. Receivables
         d. Inventories
      6. Check for the following danger signals in financing:
         a. Too small an amount of cash
         b. Overinvestment in:
            (1) Receivables
            (2) Inventories
            (3) Fixed assets
         c. Too large an amount of intangibles with too little surplus to support them
         d. Insufficient capitalization
   C. An analysis of operations with attention to
      1. Ratio of net profit to sales
      2. Reason for the variation in net profit
      3. Changes in operating expenses
      4. Changes in the ratio of operating expenses to net sales
   D. The future of the industry correlated with the financial position of the business from a common-sense viewpoint.

IV. Assemble the report as follows:
   A. Narrative analysis
   B. Statement of source and application of funds
   C. Schedule of working capital
   D. Statement of surplus
   E. Statement of variation in profit
   F. Comparative balance sheet
   G. Comparative profit and loss statement

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